

SONY®

4-132-320-13(1)

Home Theatre System

Operating Instructions
HT-DDW5500

—
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WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To reduce the risk of fire, do not cover the ventilation opening of the apparatus with newspapers, tablecloths, curtains, etc. Do not place the naked flame sources such as lighted candles on the apparatus.

To reduce the risk of fire or electric shock, do not expose this apparatus to dripping or splashing, and do not place objects filled with liquids, such as vases, on the apparatus.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

As the main plug is used to disconnect the unit from the mains, connect the unit to an easily accessible AC outlet. Should you notice an abnormality in the unit, disconnect the main plug from the AC outlet immediately.

Do not expose batteries or apparatus with battery-installed to excessive heat such as sunshine, fire or the like.

The unit is not disconnected from the mains as long as it is connected to the AC outlet, even if the unit itself has been turned off.

Excessive sound pressure from earphones and headphones can cause hearing loss.

For models of area code E51, EA, AR and TH1 only

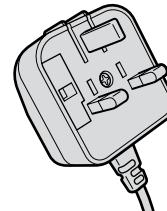


This symbol is intended to alert the user to the presence of the Hot Surface that may be hot if it is touched during the normal operation.

Note on power cord plug shapes (For customers in Saudi Arabia only)

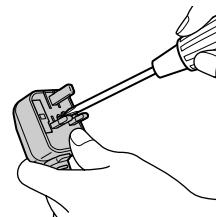
For AC 220 V wall sockets

- 1 Make the appropriate voltage setting on the system (only for models with a voltage selector).
- 2 Make sure that the 13 A 3-pin plug (Type BF) is securely attached to the power cord. (The 13 A 3-pin plug is attached when shipped from the factory).

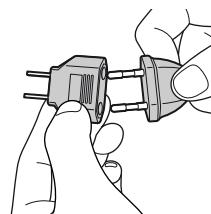


For AC 127 V wall sockets

- 1 Make the appropriate voltage setting on the system (only for models with a voltage selector).
- 2 Remove the 13 A 3-pin plug using a screwdriver.



- 3 Attach the supplied parallel blade plug (Type A).



About This Manual

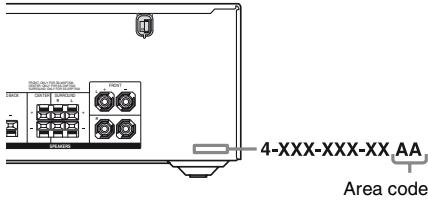
- The instructions in this manual are for model HT-DDW5500. In this manual, models of area code SP is used for illustration purposes unless stated otherwise. Any difference in operation is clearly indicated in the text, for example, “Models of area code MX only”.
- The instructions in this manual describe the controls on the supplied remote. You can also use the controls on the receiver if they have the same or similar names as those on the remote.

The HT-DDW5500 consists of:

• Receiver	STR-KM5500
• Power amplifier	TA-KMSW500
• Speaker system	
– Front speaker	SS-MSP7500
– Center speaker	SS-CNP7500
– Surround/Surround back speaker	SS-SRP7500
– Subwoofer	SS-WP7500

About area codes

The area code of the receiver you purchased is shown on the lower right portion of the rear panel (see the illustration below).



Any differences in operation, according to the area code, are clearly indicated in the text, for example, “Models of area code AA only”.

This receiver incorporates Dolby* Digital and Pro Logic Surround and the DTS** Digital Surround System.

* Manufactured under license from Dolby Laboratories. Dolby, Pro Logic, and the double-D symbol are trademarks of Dolby Laboratories.

** Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,003,467; 7,212,872 & other U.S. and worldwide patents issued & pending. DTS, DTS Digital Surround, ES, and Neo:6 are registered trademarks and the DTS logos, Symbol and DTS 96/24 are trademarks of DTS, Inc. © 1996-2008 DTS, Inc. All Rights Reserved.

This receiver incorporates High-Definition Multimedia Interface (HDMI™) technology. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

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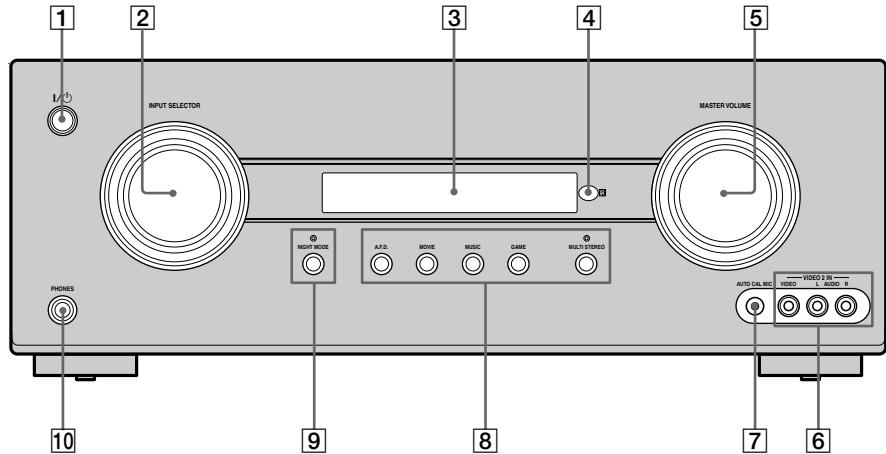
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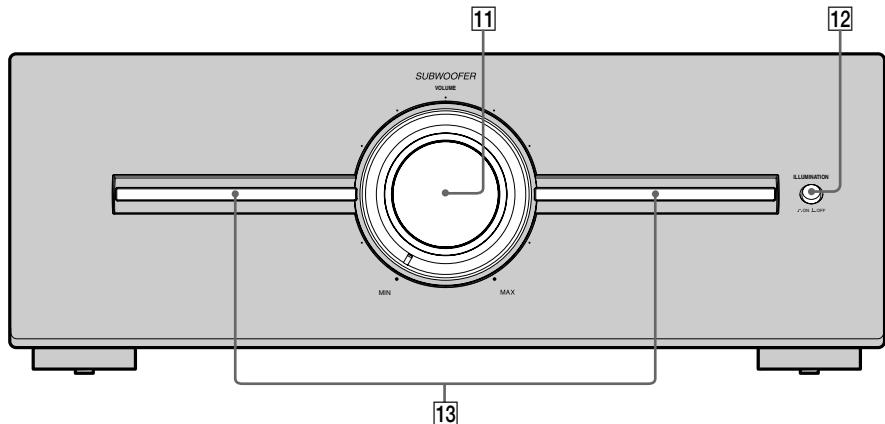
Description and location of parts

Front panel

Receiver



Power amplifier

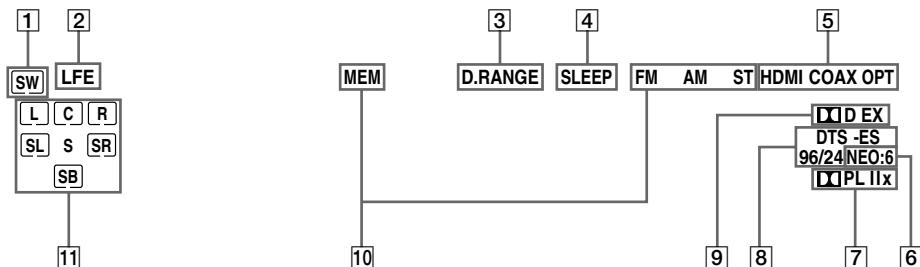


continued

Name	Function
[1] I/O (on/standby)	Press to turn the receiver on or off (page 30, 37, 38, 55, 64).
[2] INPUT SELECTOR	Turn to select the input source to play back (page 35, 37, 38, 61, 63).
[3] Display	The current status of the selected component or a list of selectable items appears here (page 7).
[4] Remote sensor	Receives signals from remote commander.
[5] MASTER VOLUME	Turn to adjust the volume level of all speakers at the same time (page 35, 36, 37, 38).
[6] VIDEO 2 IN jacks	Connect to a portable audio/video component such as a camcorder or video game (page 26, 35).
[7] AUTO CAL MIC jack	Connects to the supplied optimizer microphone for the Auto Calibration function (page 31).
[8] A.F.D.	Press to select a sound field (page 50).
MOVIE	
MUSIC	
GAME	
MULTI STEREO	
MULTI STEREO lamp	Lights up when multi stereo sound field is activated.
[9] NIGHT MODE	Press to enjoy sound effects for watching movie at night (page 41).
NIGHT MODE lamp	Lights up when NIGHT MODE is activated.
[10] PHONES jack	Connects to headphones (page 69).
[11] SUBWOOFER VOLUME	Turn to adjust the volume level of the subwoofers.

Name	Function
[12] ILLUMINATION	 ON The illumination is on (initial setting).
[13] Illumination indicator	 OFF The illumination is off.

About the indicators on the display



Name	Function
1 SW	Lights up when the audio signal is output from the SUBWOOFER jack.
2 LFE	Lights up when the disc being played back contains an LFE (Low Frequency Effect) channel and the LFE channel signal is actually being reproduced.
3 D.RANGE	Lights up when dynamic range compression is activated (page 42).
4 SLEEP	Lights up when the sleep timer is activated.
5 Input indicators	Light up to indicate the current input.
HDMI	The receiver recognizes a component connected via an HDMI IN jack.
COAX	Lights up when DVD input is selected if INPUT MODE is set to "AUTO" and the source signal is a digital signal being input through the COAXIAL jack.
OPT	Lights up when BD input is selected. However, "NO INPUT" appears on the display if no digital signal is input through the OPTICAL jack. "OPT" also lights up when SAT input is selected if INPUT MODE is set to "AUTO" and the source signal is a digital signal being input through the OPTICAL jack.
6 NEO:6	Lights up when DTS Neo:6 Cinema/Music decoder is activated.

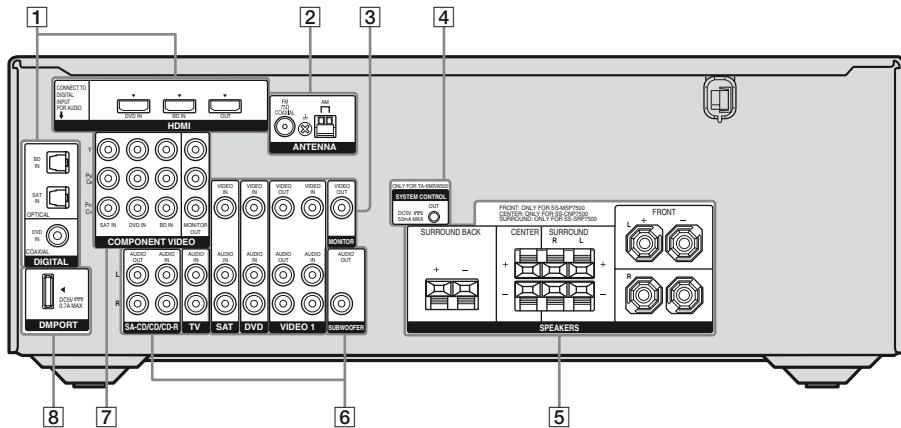
Name	Function
7 Dolby Pro Logic indicators	Lights up one of the respective indicators when the receiver applies Dolby Pro Logic processing to 2 channel signals in order to output the center and surround channel signals.
DOLBY PL	Dolby Pro Logic
DOLBY PLII	Dolby Pro Logic II
DOLBY PLIIx	Dolby Pro Logic IIx Note Dolby Pro Logic IIx decoding does not function for DTS format signals or for signals with a sampling frequency of more than 48 kHz.

continued

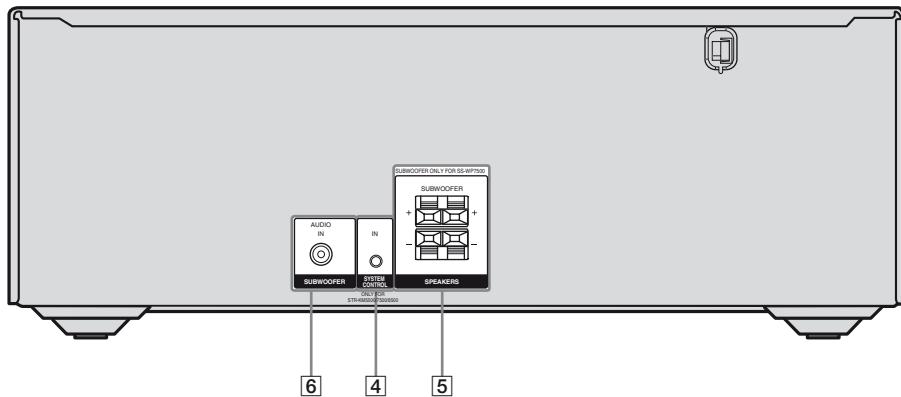
Name	Function	Name	Function
⑧ DTS-(ES) indicators	Light up when DTS or DTS-ES signals are input.	⑪ Playback channel indicators	The letters (L, C, R, etc.) indicate the channels being played back. The boxes around the letters vary to show how the receiver downmixes the source sound.
DTS	Lights up when the receiver is decoding DTS signals.	L	Front Left
DTS-ES	Lights up when the receiver is decoding DTS-ES signals.	R	Front Right
DTS 96/24	Lights up when the receiver is decoding DTS 96/24 (96 kHz/24 bit) signals. Note When playing a DTS format disc, be sure that you have made digital connections and that INPUT MODE is not set to "ANALOG" (page 59).	C	Center (monaural)
⑨ Dolby Digital Surround indicators	Lights up one of the respective indicators when the receiver is decoding the corresponding Dolby Digital format signals.	SL	Surround Left
D	Dolby Digital	SR	Surround Right
D EX	Dolby Digital Surround EX Note When playing a Dolby Digital format disc, be sure that you have made digital connections and that INPUT MODE is not set to "ANALOG".	S	Surround (monaural or the surround components obtained by Pro Logic processing)
⑩ Tuning indicators	Lights up when the receiver tunes in radio stations, etc.	SB	Surround back (the surround back components obtained by 6.1 channel decoding)
MEM	A memory function, such as Preset Memory (page 57), etc., is activated.	Example: Recording format (Front/Surround): 3/2.1 Sound Field: A.F.D. AUTO	
FM	FM band is selected.	SW LFE	
AM	AM band is selected.	L C R	
ST	Stereo broadcast.	SL SR	

Rear panel

Receiver



Power amplifier



1 DIGITAL INPUT/OUTPUT section



OPTICAL
IN jacks

Connects to a DVD
player, etc. The
COAXIAL jack



COAXIAL IN
jack

provides a better
sound quality (page
24, 25).



HDMI IN/
OUT* jacks

Connects to a DVD
player, etc. The
image and the sound
are output to a TV
(page 22).

2 ANTENNA section



FM
ANTENNA
jack

Connects to the
supplied FM wire
antenna (page 28).



AM
ANTENNA
terminals

Connects to the
supplied AM loop
antenna (page 28).

continued

9GB

3 VIDEO/AUDIO INPUT/OUTPUT section

	AUDIO IN/ White (L) OUT jacks	Connects to a VCR, DVD player, etc. (page 19, 24, 25, 26).
	VIDEO IN/ OUT* jacks	

4 SYSTEM CONTROL INPUT/OUTPUT section

	SYSTEM CONTROL OUT jack	Connects to the power amplifier (page 18).
	SYSTEM CONTROL IN jack	Connects to the receiver (page 18).

5 SPEAKERS section

		Connects to the supplied speakers (page 16).
	+	
	-	

6 AUDIO INPUT/OUTPUT section

	AUDIO IN/ White (L) OUT jacks	Connects to a Super Audio CD player, etc. (page 20).
	Red (R)	
	AUDIO OUT jack	Connects to the power amplifier (page 18).
	AUDIO IN jack	Connects to the receiver.

7 COMPONENT VIDEO INPUT/OUTPUT section

	Green (Y)	Y, P _B /C _B , P _R /C _R IN/ OUT* jacks	Connects to a DVD player, TV, satellite tuner, etc. You can enjoy high quality image (page 19, 24, 25).
	Blue (P _B /C _B)		
	Red (P _R /C _R)		

8 DMPORT



DMPORT
jack

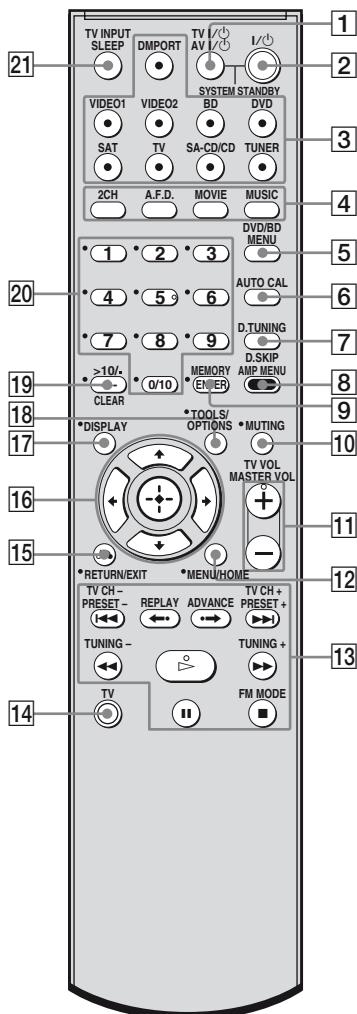
Connects to a
DIGITAL MEDIA
PORT adapter
(page 60).

*You can watch the selected input image when you connect the HDMI OUT or MONITOR OUT jack to a TV (page 19).

Remote commander

You can use the supplied remote to operate the receiver and to control the Sony audio/video components that the remote is assigned to operate. For details, see “Changing button assignments” (page 64).

RM-AAU027



Name	Function
[1] TV I/O (on/stanby)	Press TV I/O and TV ([14]) at the same time to turn the TV on or off.
[2] AV I/O (on/stanby)	Press to turn on or off the Sony audio/video components that the remote is assigned to operate. If you press I/O ([2]) at the same time, it will turn off the receiver and other components (SYSTEM STANDBY).
Note	The function of the AV I/O switch changes automatically each time you press the input buttons ([3]).
[3] I/O (on/stanby)	Press to turn the receiver on or off. To turn off all components, press I/O and AV I/O ([1]) at the same time (SYSTEM STANDBY).
[4] Input buttons	Press one of the buttons to select the component you want to use. When you press any of the input buttons, the receiver turns on. The buttons are factory assigned to control Sony components. You can change the button assignments following the steps in “Changing button assignments” on page 64.
[5] 2CH	Press to select a sound field.
A.F.D.	
MOVIE	
MUSIC	
[6] DVD/BD MENU	Press to display the menu of the DVD or Blu-ray disc on the TV screen. Then, use ↑, ↓, ←, → and ⊕ ([16]) to perform menu operations.
[7] AUTO CAL	Press to activate the Auto Calibration function (page 32).
D.TUNING	Press to enter direct tuning mode.
D.SKIP	Press to skip a disc when using a multi-disc changer.

continued

Name	Function
[8] AMP MENU	Press to display the menu of the receiver. Then, use \uparrow , \downarrow , \leftarrow , \rightarrow and \oplus ([16]) to perform menu operations.
[9] ENTER	Press to enter the value after selecting a channel, disc or track using the numeric buttons of the TV, VCR or satellite tuner.
MEMORY	Press to store a station.
[10] MUTING	Press to turn off the sound temporarily. Press MUTING again to restore the sound. Press MUTING and TV ([14]) at the same time to activate the TV's muting function.
[11] TV VOL +^{a)/-}	Press TV VOL +/- and TV ([14]) at the same time to adjust the TV volume level.
MASTER VOL +^{a)/-}	Press to adjust the volume level of all speakers at the same time.
[12] MENU/HOME	Press to display the menu of the VCR, DVD player, satellite tuner or Blu-ray disc player on the TV screen. Press MENU/HOME and TV ([14]) at the same time to display the TV's menu. Then, use \uparrow , \downarrow , \leftarrow , \rightarrow and \oplus ([16]) to perform menu operations.
[13] <</>>^{b)}	Press to skip a track of the CD player, DVD player or Blu-ray disc player.
REPLAY \leftarrow. / ADVANCE \rightarrow.	Press to replay the previous scene or fast forward the current scene of the VCR, DVD player or Blu-ray disc player.
<</>>^{b)}	Press to – search tracks in the forward/reverse direction of the DVD player. – start fast forward/rewind of the VCR, CD player or Blu-ray disc player.
\triangleright^{a)b)}	Press to start playback of the VCR, CD player, DVD player or Blu-ray disc player.
[15] RETURN/ EXIT \circlearrowleft^{c)}	Press to – return to the previous menu. – exit the menu while the menu or on-screen guide of the VCR, DVD player, satellite tuner or Blu-ray disc player is displayed on the TV screen. Press RETURN/EXIT \circlearrowleft ^{c)} and TV ([14]) at the same time to return to the previous menu or exit the TV's menu while the menu is displayed on the TV screen.
[16] \ominus $\uparrow/\downarrow/\leftarrow/\rightarrow$	After pressing DVD/BD MENU ([5]), AMP MENU ([8]) or MENU/HOME ([12]), press \uparrow , \downarrow , \leftarrow or \rightarrow to select the settings. Then, press \oplus to enter the selection if you have pressed DVD/BD MENU or MENU/HOME previously. Press \oplus also to enter the selection of the receiver, VCR, satellite tuner, CD player, DVD player or Blu-ray disc player.

Name	Function
[17] DISPLAY	Press to select information displayed on the TV screen of the VCR, satellite tuner, CD player, DVD player or Blu-ray disc player. Press DISPLAY and TV ([14]) at the same time to display TV's information on the TV screen.
[18] TOOLS/ OPTIONS	Press to display and select the options of the DVD player or Blu-ray disc player. Press TOOLS/OPTIONS and TV ([14]) at the same time to display options applicable to the Sony TV.
[19] -/-	Press to select the channel entry mode, either one or two digits of the VCR. Press -/- and TV ([14]) at the same time to select the channel entry mode, either one or two digits of the TV.
>10/-	Press to select – track numbers over 10 of the VCR, satellite tuner or CD player. – channel numbers of the Digital CATV terminal.
CLEAR	Press to clear a mistake when you press the incorrect numeric button.
[20] Numeric buttons (number 5^a)	Press to – preset/tune to preset stations. – select track numbers of the CD player, DVD player or Blu-ray disc player. Press 0/10 to select track number 10. – select channel numbers of the VCR or satellite tuner. Press the numeric buttons and TV ([14]) at the same time to select the TV channels.
[21] TV INPUT	Press TV INPUT and TV ([14]) at the same time to select the input signal (TV input or video input).
SLEEP	Press to activate the Sleep Timer function and the duration which the receiver turns off automatically.

- a)The tactile dot is attached to these buttons (The number 5, MASTER VOL +/TV VOL +, ▷). Use as a mark of operation.
- b)This button is also available for DIGITAL MEDIA PORT adapter operation. For details on the function of the button, see the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

Notes

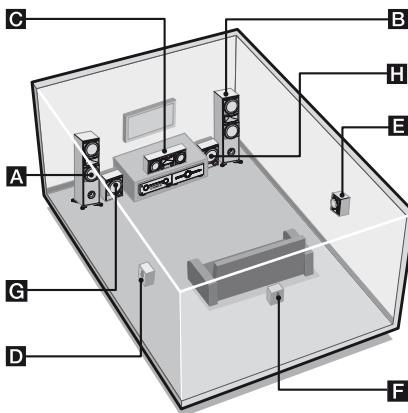
- Some functions explained in this section may not work depending on the model.
- The above explanation is intended to serve as an example only. Therefore, depending on the component, the above operation may not be possible or may operate differently than described.

Getting Started

1: Installing the speakers

This receiver allows you to use a 6 channel speaker with 2 subwoofer system.

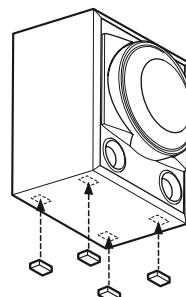
Example of a 6 channel speaker with 2 subwoofer system configuration



- A** Front speaker (left)
- B** Front speaker (right)
- C** Center speaker
- D** Surround speaker (left)
- E** Surround speaker (right)
- F** Surround back speaker
- G** Subwoofer
- H** Subwoofer

Installing the speakers on a flat surface

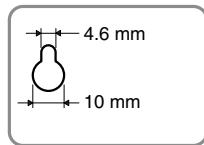
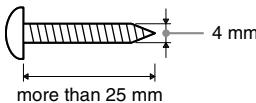
Before you install the center speaker, surround speakers, surround back speaker and subwoofers, be sure to attach the supplied foot pads to prevent vibration or movement as shown in the illustration below.



Installing the speakers on the wall

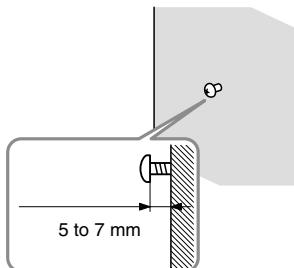
You can install your surround and surround back speakers on the wall.

- 1 Prepare screws (not supplied) that are suitable for the hook on the back of each speaker as shown in the illustrations below.



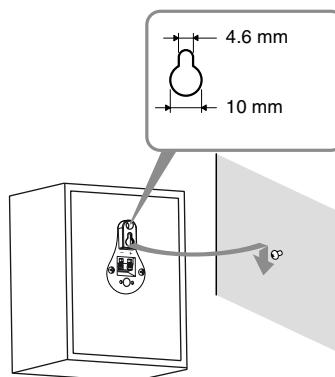
Hook on the back of the speaker

- 2 Fasten the screws to the wall. The screws should protrude 5 to 7 mm.



- 3 Hang the speakers on the screws.

Hook on the back of the speaker



Notes

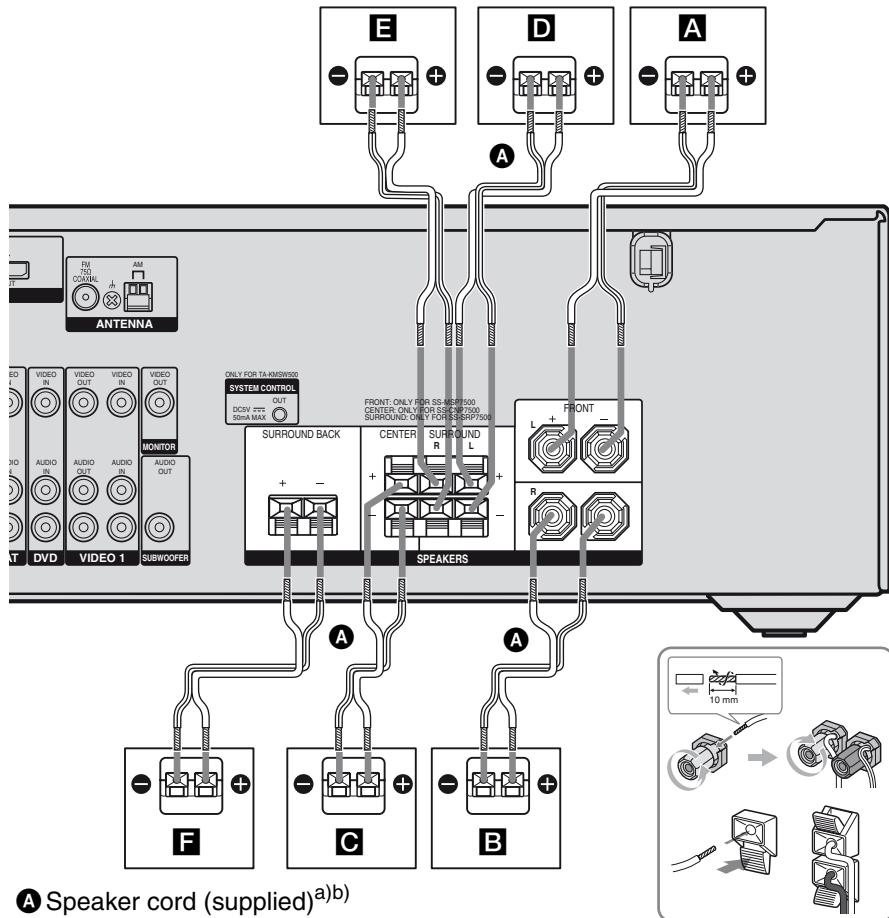
- Use screws that are suitable for the wall material and strength. As a plaster board wall is especially fragile, attach the screws securely to a beam and fasten them to the wall. Install the speakers on a vertical and flat wall where reinforcement is applied.
- Contact a screw shop or installer regarding the wall material or screws to be used.
- Sony is not responsible for accident or damage caused by improper installation, insufficient wall strength or improper screw installation, natural calamity, etc.

2: Connecting the speakers and subwoofers

Before connecting the cords, be sure to disconnect the AC power cord.

Connecting the speakers

The following illustration shows how to connect to the speakers.



A Speaker cord (supplied)^{a)b)}

- A** Front speaker (left)
- B** Front speaker (right)
- C** Center speaker
- D** Surround speaker (left)
- E** Surround speaker (right)
- F** Surround back speaker

^{a)}Use the long speaker cords to connect the surround and surround back speakers and the short speaker cords to connect the front speakers.

^{b)}Connect the cord attached with the “CENTER” label to the center speaker.

To connect the speakers correctly

Check the speaker type by referring to the speaker label* on the rear panel of the speakers.

Character on speaker label	Speaker type
L	Front left
R	Front right
SL	Surround left
SR	Surround right
SB	Surround back

*The center speaker and subwoofers do not have any character on the speaker label. For details on the speaker type, see page 3.

Tip

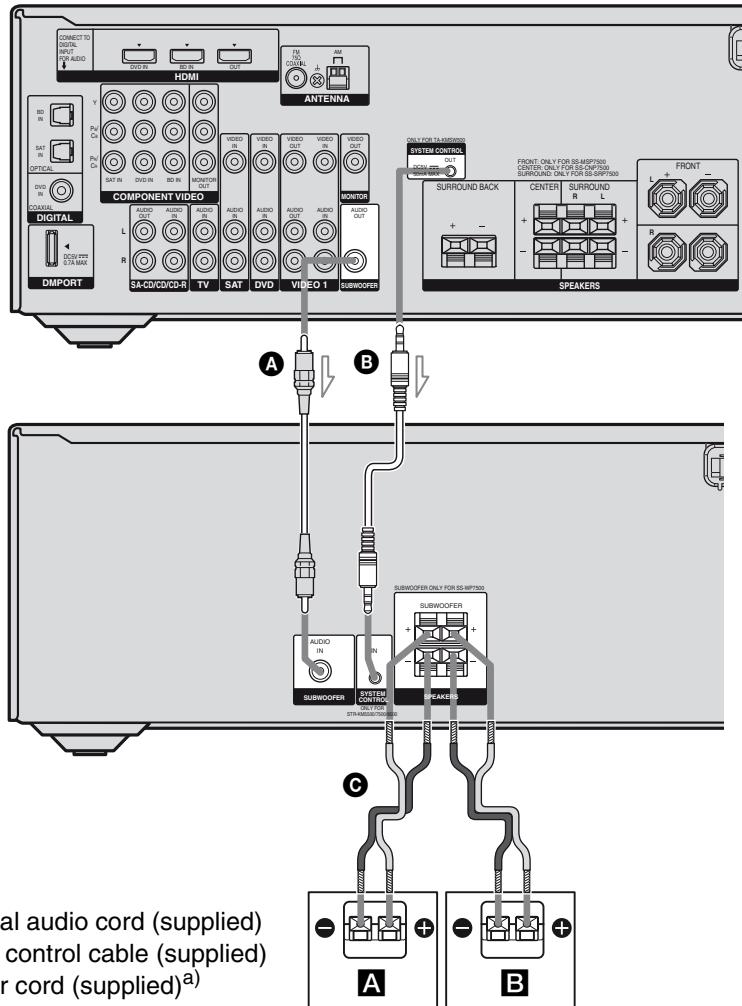
Use the supplied speakers to optimize the system's performance.

Connecting the subwoofers

The following illustration shows how to connect to the subwoofers.

Note

To adjust the volume of all the speakers and the subwoofers at the same time, press MASTER VOL +/- on the remote. You can also use MASTER VOLUME on the receiver.



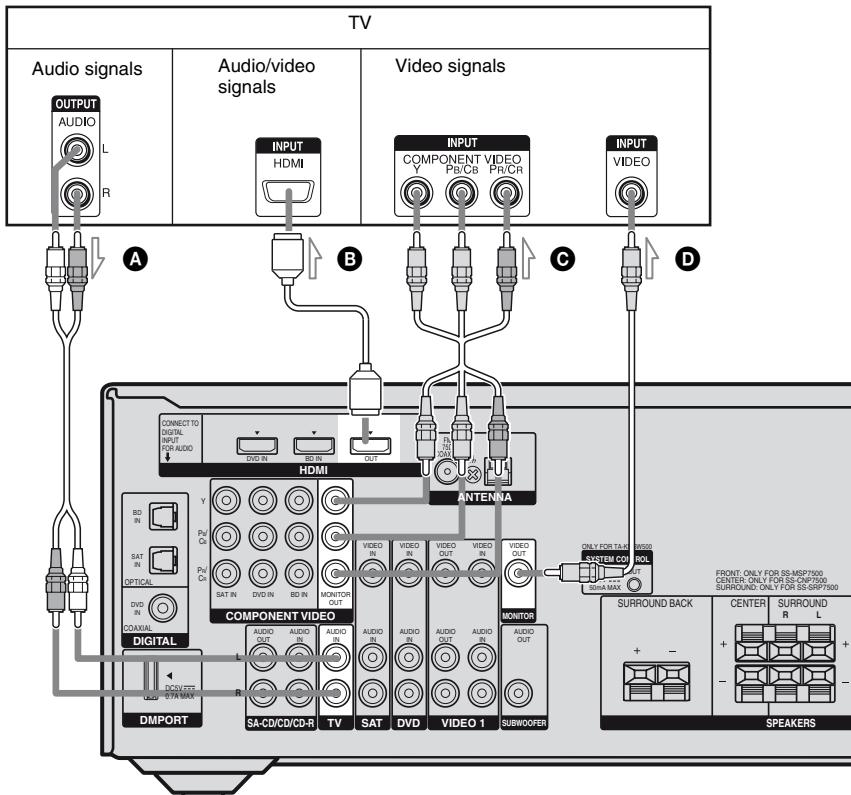
^{a)}Use the red and black speaker cords to connect the subwoofers.

Red wire is positive (+) in polarity and should be connected to the positive (+) speaker terminal. Connect black wire to the negative (-) speaker terminal.

3: Connecting the TV

You can watch the selected input image when you connect the HDMI OUT or MONITOR OUT jack to a TV.

It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components. Before connecting the cords, be sure to disconnect the AC power cord.



- A** Audio cord (not supplied)
- B** HDMI cable (not supplied)
We recommend that you use a Sony HDMI cable.
- C** Component video cord (not supplied)
- D** Video cord (not supplied)

continued

Note

Be sure to turn on the receiver when the video and audio signals of a playback component are being output to a TV via the receiver. Unless the power is turned on, neither video nor audio signals will be transmitted.

Tip

To output the sound of the TV from the speakers connected to the receiver, be sure to

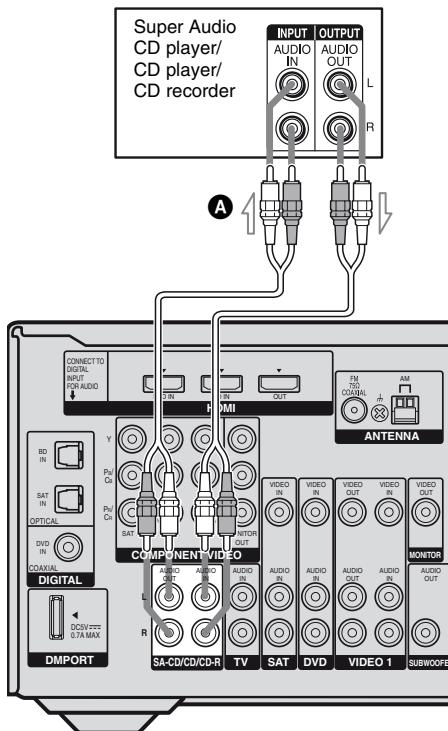
- connect the audio output jacks of the TV to the TV IN jack of the receiver.
- turn off the TV's volume or activate the TV's muting function.

4a: Connecting the audio components

Connecting a Super Audio CD/CD player or CD recorder

The following illustration shows how to connect a Super Audio CD player, CD player or CD recorder. Before connecting the cords, be sure to disconnect the AC power cord.

After connecting your Super Audio CD player, CD player or CD recorder, proceed to “4b: Connecting the video components” (page 21) or “5: Connecting the antennas” (page 28).



Ⓐ Audio cord (not supplied)

4b: Connecting the video components

How to hook up your components

This section describes how to hook up your components to this receiver. Before you begin, refer to “Component to be connected” below for the pages which describe how to connect each component.

Before connecting the cords, be sure to disconnect the AC power cord.

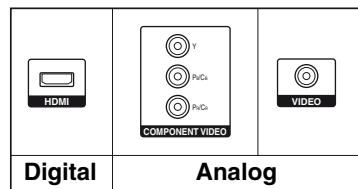
After hooking up all your components, proceed to “5: Connecting the antennas” (page 28).

Component to be connected

Component	Page
TV	19
With HDMI jack	22
DVD player	24
Satellite tuner/Set-top box	25
DVD recorder, VCR	26
Camcorder, video game, etc.	26

Video input/output jack to be connected

The image quality depends on the connecting jack. Refer to the illustration that follows. Select the connection according to the jacks on your components.



→ High quality image

Note

Be sure to turn on the receiver when the video and audio signals of a playback component are being output to a TV via the receiver. Unless the power is turned on, neither video nor audio signals will be transmitted.

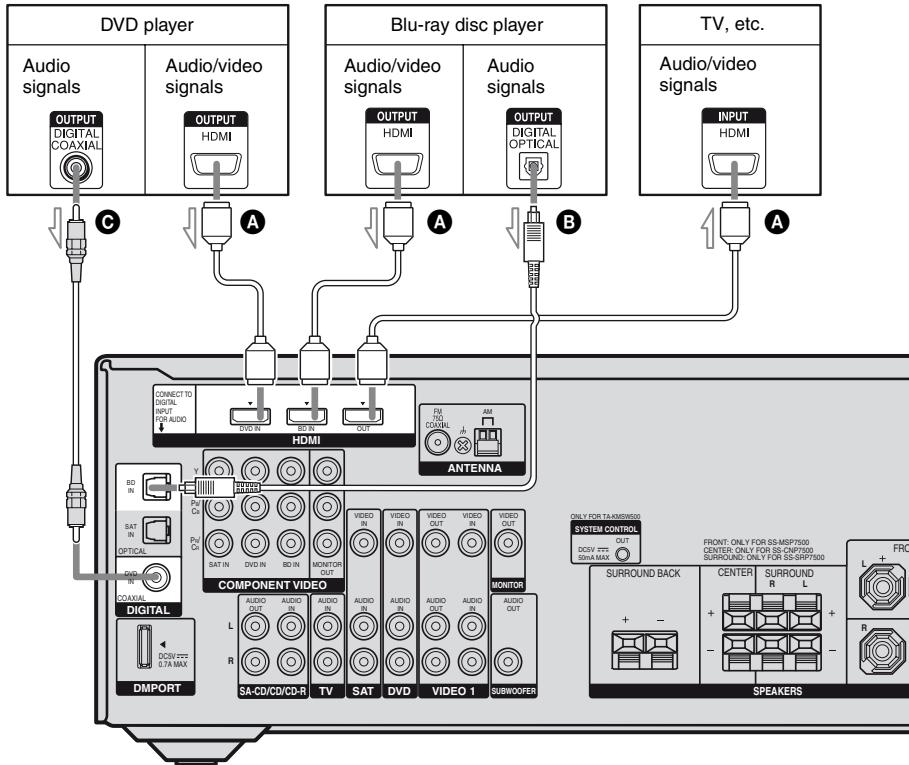
Connecting components with HDMI jacks

HDMI is the abbreviated name for High-Definition Multimedia Interface. It is an interface which transmits video and audio signals in digital format.

The sound is output from the TV speaker only when a playback component and this receiver, as well as this receiver and the TV are connected via an HDMI jack.

To output the sound from the supplied speakers and to take advantage of the multi channel surround sound, be sure to

- connect the digital audio jacks on the playback component to the receiver.
- turn off the TV's volume or activate the TV's muting function.



Ⓐ HDMI cable (not supplied)

We recommend that you use a Sony HDMI cable.

Ⓑ Optical digital cord (not supplied)

Ⓒ Coaxial digital cord (supplied)

Notes on HDMI connections

- This receiver may not be able to transfer video or audio signals with certain types of components.
- The multi/stereo area audio signals of a Super Audio CD are not output.
- Be sure to turn on the receiver when the video and audio signals of a playback component are being output to a TV via the receiver. Unless the power is turned on, neither video nor audio signals will be transmitted.
- Check the setup of the connected component if the image is poor or the sound does not come out of a component connected via the HDMI cable.
- Video signals input to the HDMI IN jack can only be output from the HDMI OUT jack. The video input signals cannot be output from the VIDEO OUT jacks or MONITOR OUT jacks.
- Refer to the operating instructions of each component connected for details.

Notes on digital audio connection

- When connecting optical digital cords, insert the plugs straight in until they click into place.
- Do not bend or tie optical digital cords.

Tip

All the digital audio jacks are compatible with 32 kHz, 44.1 kHz, 48 kHz, and 96 kHz sampling frequencies.

Connecting a DVD player

The following illustration shows how to connect a DVD player.

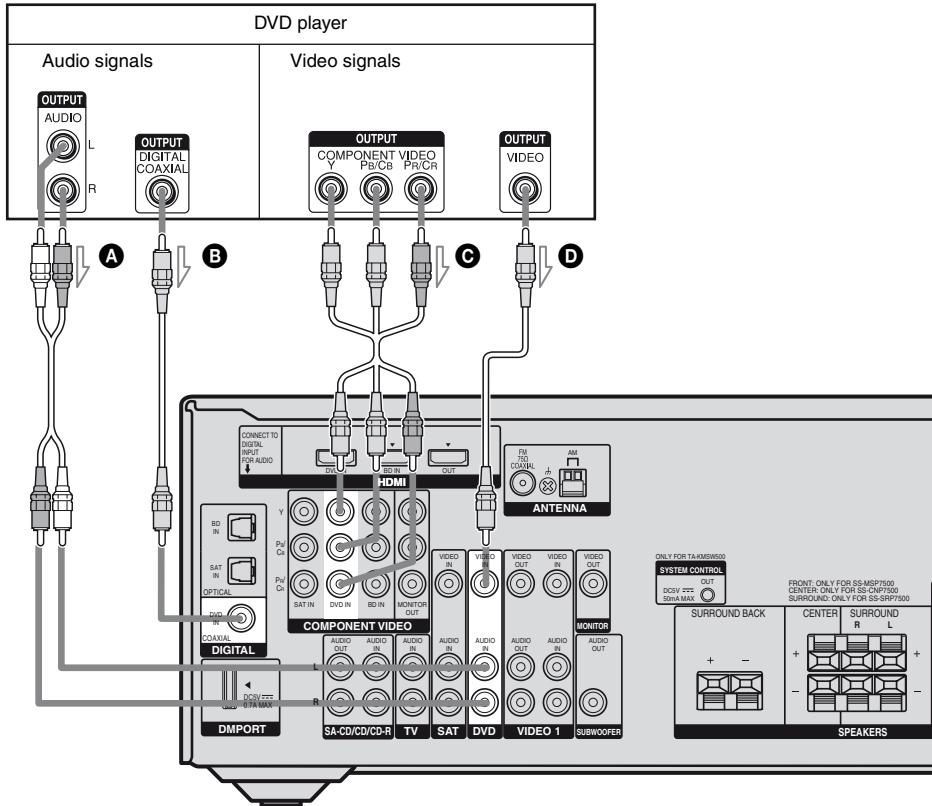
It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components.

Note

To input multi channel digital audio from the DVD player, set the digital audio output setting on the DVD player. Refer to the operating instructions supplied with the DVD player.

Tip

All the digital audio jacks are compatible with 32 kHz, 44.1 kHz, 48 kHz, and 96 kHz sampling frequencies.



- Ⓐ Audio cord (not supplied)
- Ⓑ Coaxial digital cord (supplied)
- Ⓒ Component video cord (not supplied)
- Ⓓ Video cord (not supplied)

Connecting a satellite tuner/ set-top box

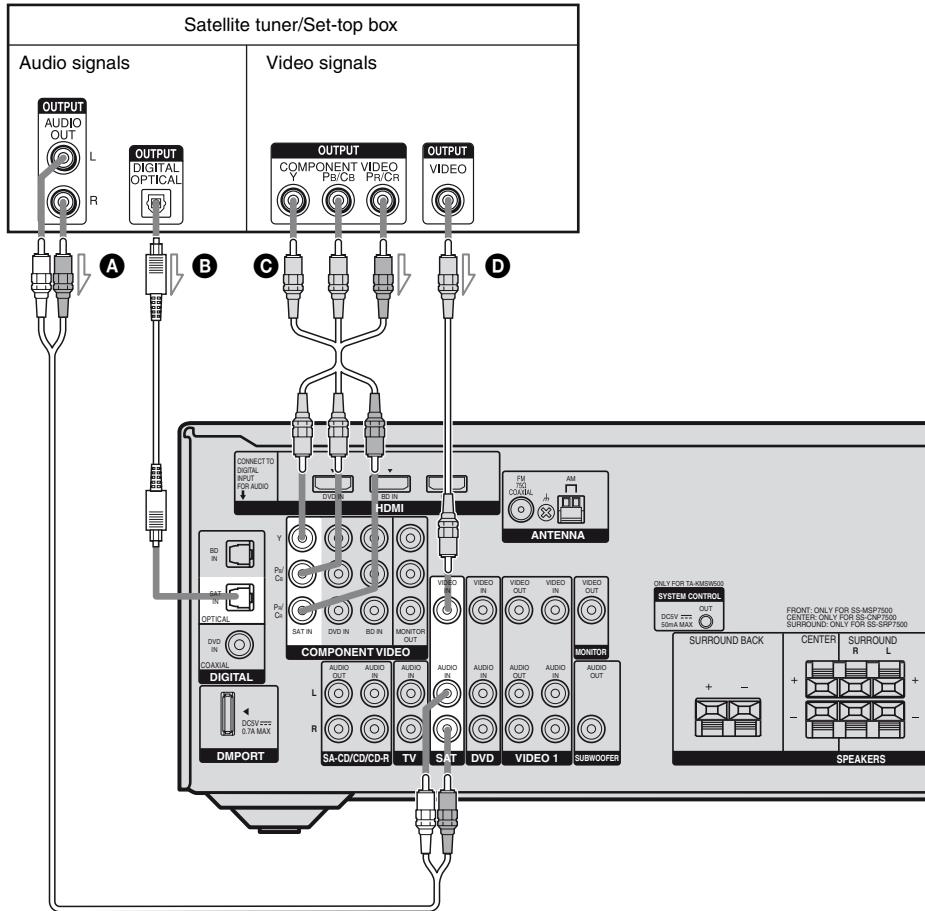
The following illustration shows how to connect a satellite tuner or set-top box. It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components.

Notes

- When connecting optical digital cords, insert the plugs straight in until they click into place.
- Do not bend or tie optical cords.

Tip

All the digital audio jacks are compatible with 32 kHz, 44.1 kHz, 48 kHz, and 96 kHz sampling frequencies.

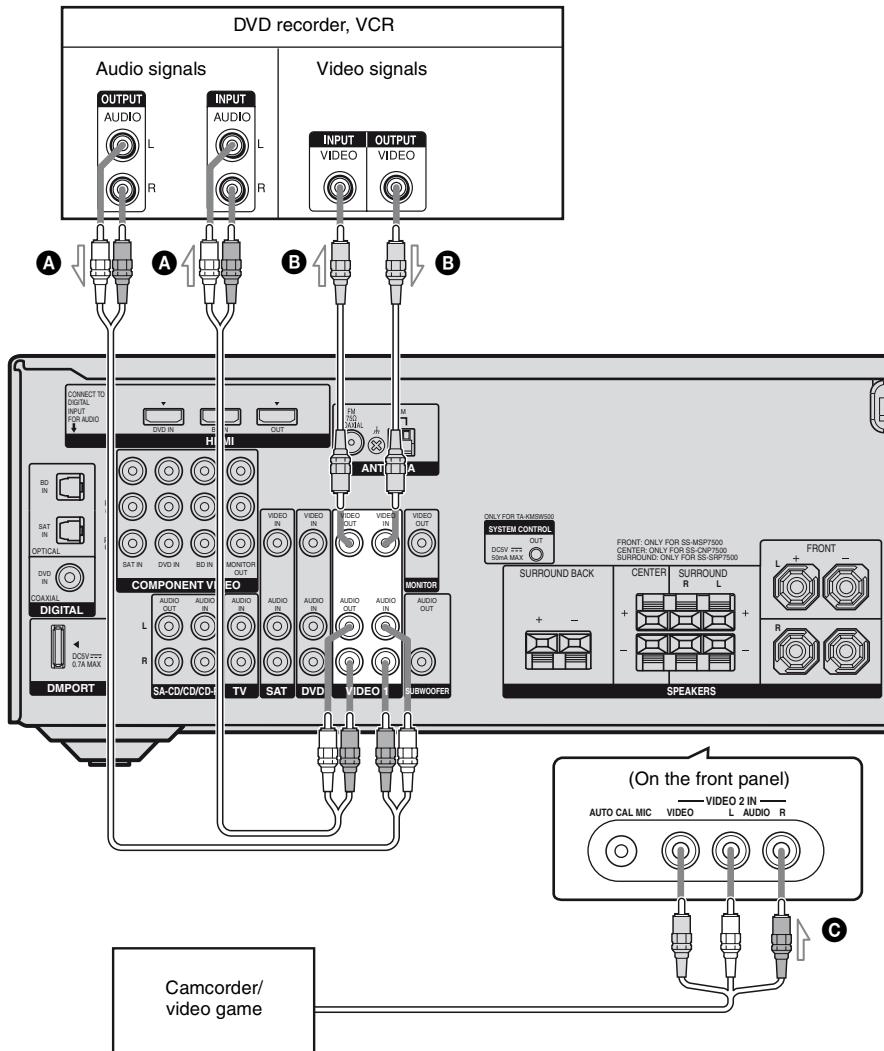


- A** Audio cord (not supplied)
- B** Optical digital cord (not supplied)
- C** Component video cord (not supplied)
- D** Video cord (not supplied)

Connecting components with analog video and audio jacks

The following illustration shows how to connect a component which has analog jacks such as a DVD recorder, VCR, etc.

It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components.



- A** Audio cord (not supplied)
- B** Video cord (not supplied)
- C** Audio/video cord (not supplied)

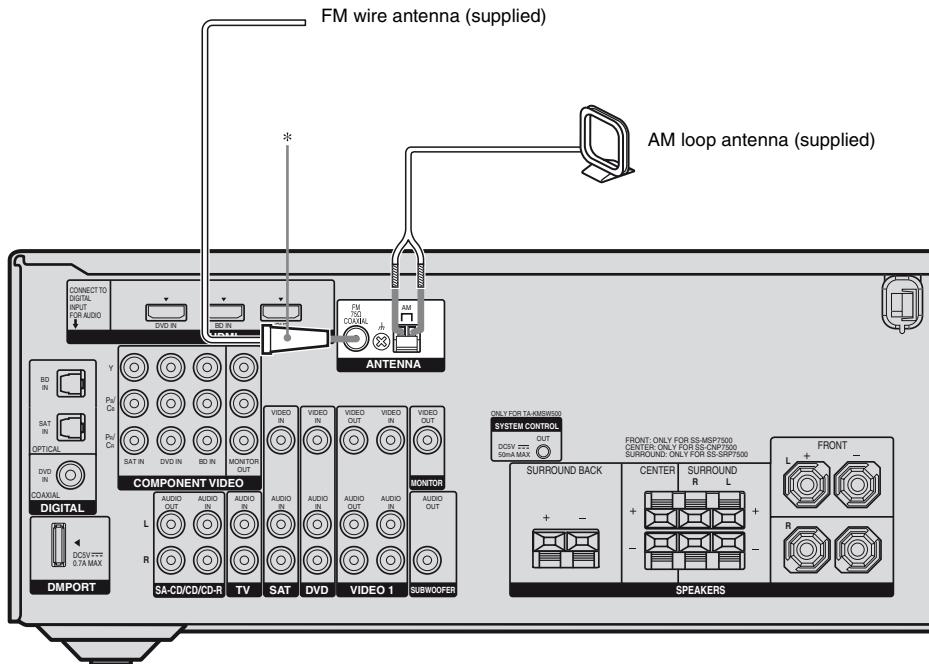
Notes

- Be sure to change the factory setting of the VIDEO 1 input button on the remote so that you can use the button to control your DVD recorder. For details, see “Changing button assignments” (page 64).
- You can also rename the VIDEO 1 input so that it can be displayed on the receiver’s display. For details, see “Naming inputs” (page 36).

5: Connecting the antennas

Connect the supplied AM loop antenna and FM wire antenna.

Before connecting the antennas, be sure to disconnect the AC power cord.



*The shape of the connector varies depending on the area code of this receiver.

Notes

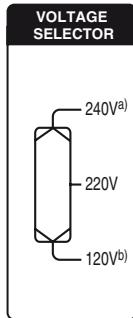
- To prevent noise pickup, keep the AM loop antenna away from the receiver and other components.
- Be sure to fully extend the FM wire antenna.
- After connecting the FM wire antenna, keep it as horizontal as possible.

6: Preparing the receiver and the remote

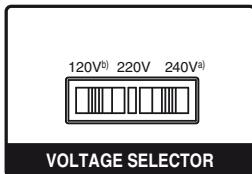
Setting the voltage selector

If your receiver and power amplifier has a voltage selector on the rear panel, check that the voltage selector is set to the local power supply voltage. If not, use a screwdriver to set the selector to the correct position before connecting the AC power cord to a wall outlet. Depending on the models of area code, the VOLTAGE SELECTOR may differ.

Receiver



Power amplifier

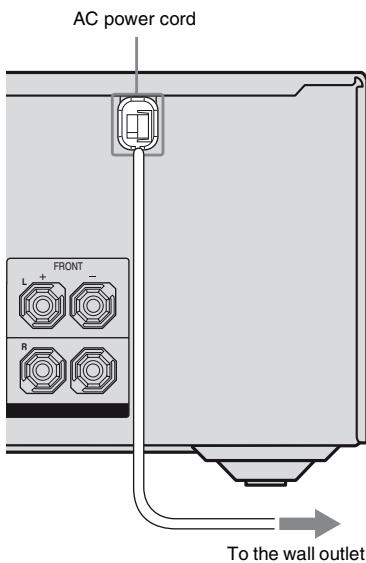


^{a)}For the models of area code EA: 230 - 240V

^{b)}For the models of area code EA: 120 - 127V

Connecting the AC power cord

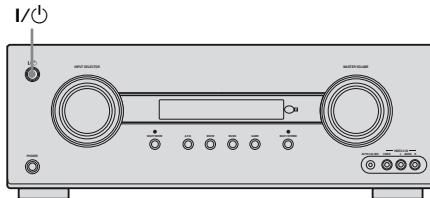
Connect the AC power cord to a wall outlet.



Performing initial setup operations

Before using the receiver for the first time, initialize the receiver by performing the following procedure. This procedure can also be used to return settings you have made to their factory defaults.

Be sure to use the buttons on the receiver for this operation.



- 1 Press I/\odot to turn off the receiver.**
- 2 Hold down I/\odot for 5 seconds.**

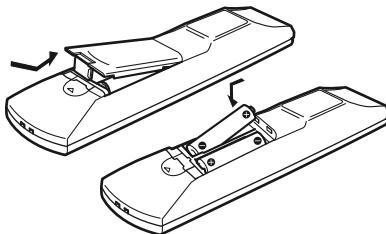
After "CLEARING" appears on the display for a while, "CLEARED" appears.

All the settings you have changed or adjusted are reset to the initial settings.

Inserting batteries into the remote

Insert two R6 (size-AA) batteries in the RM-AAU027 Remote Commander.

Observe the correct polarity when installing batteries.



Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with old ones.
- Do not mix manganese batteries and other kinds of batteries.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you do not intend to use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.
- When you replace the batteries, the remote buttons may be reset to their factory settings. If this happens, reassign the buttons again (page 64).
- When the remote no longer operates the receiver, replace all the batteries with new ones.

7: Calibrating the appropriate settings automatically

(AUTO CALIBRATION)

The DCAC (Digital Cinema Auto Calibration) function allows you to perform automatic calibration such as:

- Checking the connection between each speaker and the receiver.
- Adjusting the speaker level.
- Measuring the distance of each speaker from your seating position automatically.

The DCAC is designed to obtain proper sound balance in your room. However, you can adjust the speaker levels and balance manually according to your preference. For details, see “8: Adjusting the speaker levels and balance (TEST TONE)” (page 34).

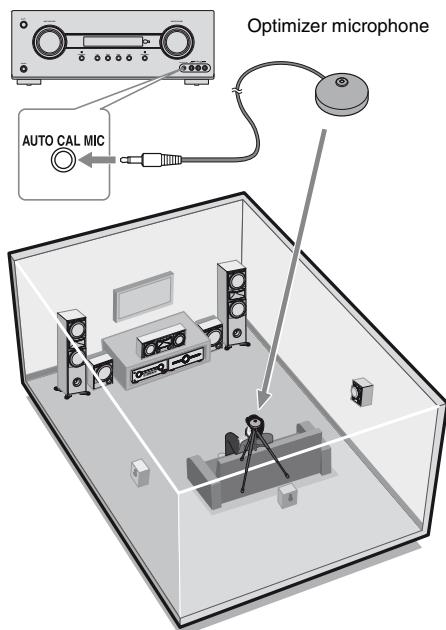
Before you perform Auto Calibration

Before you perform Auto Calibration, install and connect the speakers (page 14, 16).

- The AUTO CAL MIC jack is used for the supplied optimizer microphone only. Do not connect other microphones to this jack. Doing so may damage the receiver and the microphone.
- During calibration, the sound that comes out of the speakers is very loud. The volume of the sound cannot be adjusted. Pay attention to the presence of children or to the effect on your neighborhood.
- Perform Auto Calibration in a quiet environment to avoid the effect of noise and to get a more accurate measurement.
- If there are any obstacles in the path between the optimizer microphone and the speakers, the calibration cannot be performed correctly. Remove any obstacles from the measurement area to avoid measurement error.

Notes

- The Auto Calibration function does not work when headphones are connected.
- If the muting function has been activated before you perform Auto Calibration, the muting function will be set to off automatically.



1 Connect the supplied optimizer microphone to the AUTO CAL MIC jack.

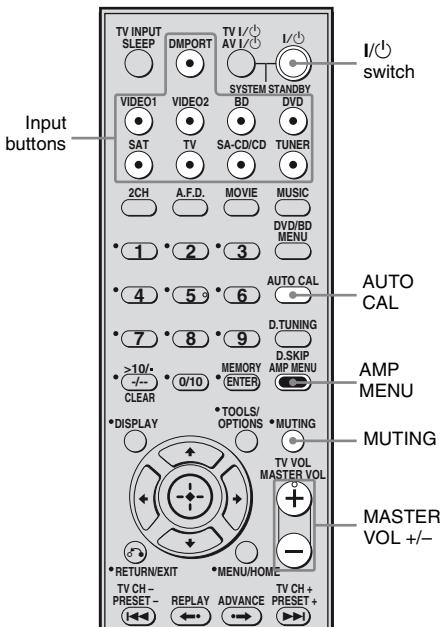
2 Set up the optimizer microphone.

Place the optimizer microphone at your seating position. Use a stool or tripod so that the optimizer microphone remains at the same height as your ears.

Tip

When you face the speaker towards the optimizer microphone, you will get a more accurate measurement.

Performing Auto Calibration



1 Press AMP MENU.

2 Press AUTO CAL.

Measurement starts in 5 seconds and the display changes as follows:

A.CAL [5] → A.CAL [4] → A.CAL [3]
→ A.CAL [2] → A.CAL [1]

While the time is counting down, stand away from the measurement area to avoid measurement error.

3 Measurement starts.

The measurement process will take a few minutes to complete.

The table below shows the display when measurement starts.

Measurement for	Display
Environment noise level	NOISE.CHK
Speaker connection	MEASURE and SP DET. appears alternately*
Speaker level	MEASURE and GAIN appears alternately*
Speaker distance	MEASURE and DISTANCE appears alternately*

* The corresponding speaker indicator lights up in the display during measurement.

4 Measurement ends.

“COMPLETE” appears on the display and the settings are registered.

After you have finished

Disconnect the optimizer microphone from the AUTO CAL MIC jack.

Notes

- Auto Calibration cannot detect the subwoofer. Therefore, the subwoofer settings will be maintained.
- If you have changed the position of the speakers, it is recommended that you perform Auto Calibration again to enjoy the surround sound.
- You cannot select Auto Calibration when the headphones are connected.

Tips

- When Auto Calibration starts:
 - Stand some distance away from the speakers and the listening position to avoid measurement failure. This is because test signals are output from the speakers during measurement.
 - Avoid making noise to get a more accurate measurement.
- The Auto Calibration function will be canceled when you do the following during the measurement process:
 - Press I/O or MUTING.
 - Press the input buttons or turn the INPUT SELECTOR on the receiver.
 - Change the MASTER VOLUME level.
 - Connect the headphones.
 - Press AUTO CAL again.

Error and warning codes

When error codes appear

When an error is detected during Auto Calibration, an error code will appear on the display cyclically after each measurement process as follows:

Error code → blank display → (error code → blank display)^{a)} → PUSH → blank display → ENTER

^{a)}Appears when there are more than one error code.

To rectify the error

1 Record down the error code.

2 Press \oplus .

3 Press $I/\text{ } \text{ } \text{ } \text{ } \text{ }$ to turn off the receiver.

4 Rectify the error.

For details, see “Error codes and remedies” below.

5 Turn on the receiver and perform Auto Calibration again (page 32).

Error codes and remedies

Error code	Cause and remedy
ERROR 10	The environment is too noisy. Make sure the environment is quiet during Auto Calibration.
ERROR 11	The speakers are placed too near the optimizer microphone. Place your speakers further away from the optimizer microphone.
ERROR 12	None of the speakers are detected. Make sure that the optimizer microphone is connected properly and perform Auto Calibration again.
ERROR 20	The front speakers are not detected or only one front speaker is detected. Check the front speakers connection.
ERROR 21	Only one surround speaker is detected. Check the surround speakers connection.
ERROR 23	Surround back speaker is detected but surround speakers are not connected. Be sure to connect the surround speakers.

When warning codes appear

During Auto Calibration, the warning code provides information on the measurement result. The warning code will appear on the display cyclically as follows:

Warning code → blank display → (warning code → blank display)^{b)} → PUSH → blank display → ENTER

^{b)}Appears when there are more than one warning code.

You can choose to ignore the warning code as the Auto Calibration function will automatically adjust the settings. You can also change the settings manually.

To change the settings manually

1 Record down the warning code.

2 Press \oplus .

3 Press $I/\text{ } \text{ } \text{ } \text{ } \text{ }$ to turn off the receiver.

4 Follow the solution provided in the “Warning codes and solutions” below.

5 Turn on the receiver and perform Auto Calibration again (page 32).

Warning codes and solutions

Warning code	Explanation and solution
--------------	--------------------------

continued

Warning code	Explanation and solution
WARN. 63	The surround left speaker level is out of range. Reposition your surround left speaker. ^{d)}
WARN. 64	The surround right speaker level is out of range. Reposition your surround right speaker. ^{d)}
WARN. 65	The surround back speaker level is out of range. Reposition your surround back speaker. ^{d)}
WARN. 70	The front speakers distance are out of range. Reposition your front speakers. ^{c)}
WARN. 72	The center speaker distance is out of range. Reposition your center speaker. ^{d)}
WARN. 73	The surround left speaker distance is out of range. Reposition your surround left speaker. ^{d)}
WARN. 74	The surround right speaker distance is out of range. Reposition your surround right speaker. ^{d)}
WARN. 75	The surround back speaker distance is out of range. Reposition your surround back speaker. ^{d)}

c)For details, refer “Front speaker distance” (page 47).

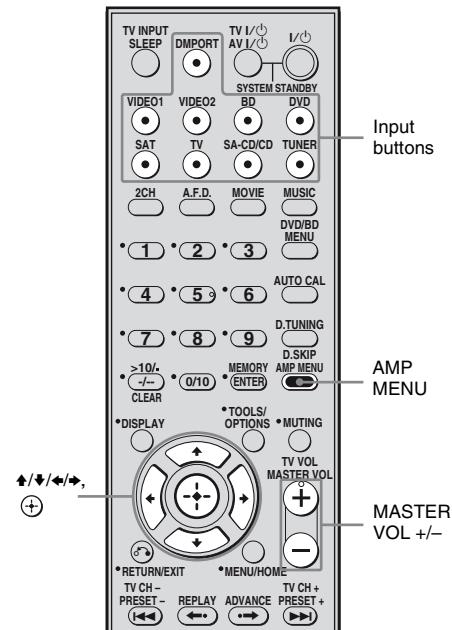
d)For details, refer “Tip” on page 47.

8: Adjusting the speaker levels and balance (TEST TONE)

You can adjust the speaker levels and balance while listening to the test tone from your listening position.

Tip

The receiver employs a test tone with a frequency centered at 800 Hz.



- 1 Press AMP MENU.**
“1-LEVEL” appears on the display.
- 2 Press \oplus or \rightarrow to enter the menu.**
- 3 Press \uparrow / \downarrow repeatedly to select “T. TONE”.**
- 4 Press \oplus or \rightarrow to enter the parameter.**

5 Press **↑/↓** repeatedly to select “T.TONE Y”.

The test tone is output from each speaker in sequence as follows:

Front left → Center → Front right → Surround right → Surround back → Surround left → Subwoofer

6 Adjust the speaker levels and balance using the LEVEL menu so that the level of the test tone sounds the same from each speaker.

For details, see “Adjusting the level (LEVEL menu)” (page 42).

Tips

- To adjust the level of all speakers at the same time, press MASTER VOL **+/-**. You can also use MASTER VOLUME on the receiver.
- The adjusted value are shown on the display during adjustment.

7 Repeat steps 1 to 5 to select “T.TONE N”.

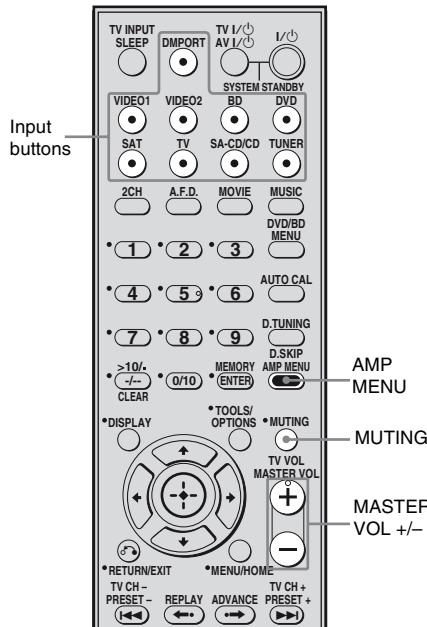
You can also press any input buttons. The test tone turns off.

When a test tone is not output from the speakers

- The speaker cords may not be connected securely.
- The speaker cords may have the short-circuit problem.

Playback

Selecting a component



1 Press the input button to select a component.

You can also use INPUT SELECTOR on the receiver.

The selected input appears on the display.

Selected input [Display]	Components that can be played back
DMPORT [DMPORT]	DIGITAL MEDIA PORT adapter connected to DMPORT jack
VIDEO 1 [VIDEO 1]	DVD recorder, VCR, etc., connected to the VIDEO 1 IN jack
VIDEO 2 [VIDEO 2]	Camcorder, video game, etc., connected to the VIDEO 2 IN jack
BD [BD]	Blu-ray disc player, etc., connected to the BD jack

continued

Selected input [Display]	Components that can be played back
DVD [DVD]	DVD player, etc., connected to DVD jack
SAT [SAT]	Satellite tuner, etc., connected to the SAT jack
TV [TV]	TV, etc. connected to TV jack
SA-CD/CD [SA-CD/CD/ CD-R]*	Super Audio CD/CD player, etc., connected to the SA-CD/CD/CD-R jack
TUNER [FM or AM band]	Built-in radio tuner

* “SA-CD/CD/CD-R” scroll across the display, then “SA-CD/CD” appears.

- 2 Turn on the component and start playback.**
- 3 Press MASTER VOL +/- to adjust the volume.**

You can also use MASTER VOLUME on the receiver.

To activate the muting function

Press MUTING.

The muting function will be canceled when you do the following.

- Press MUTING again.
- Increase the MASTER VOLUME.
- Turn off the receiver.

To avoid damaging your speakers

Before you turn off the receiver, be sure to turn down the volume level.

To listen to the subwoofers

- You can use the SUBWOOFER VOLUME on the power amplifier to adjust the volume of the subwoofers.
- Set the volume level to suit your preference according to the selected input as slight adjustments may enhance the sound.
- If you set the subwoofer volume to maximum, extraneous noise may be heard depending on the source you are playing.

Naming inputs

You can enter a name of up to 8 characters for inputs and display it on the receiver's display. This is convenient for labeling the jacks with the names of the connected components.

- 1 Press the input button to select the input you want to create an index name for.**
- 2 Press AMP MENU.**
“1-LEVEL” appears on the display.
- 3 Press \uparrow/\downarrow repeatedly to select “7-SYSTEM”.**
- 4 Press \oplus or \rightarrow to enter the menu.**
- 5 Press \uparrow/\downarrow repeatedly to select “NAME IN”.**
- 6 Press \oplus or \rightarrow to enter the parameter.**
The cursor flashes and you can select a character.
- 7 Press \uparrow/\downarrow to select a character, then press \leftarrow/\rightarrow to move the cursor to the next position.**

If you made a mistake

Press \leftarrow/\rightarrow until the character you want to change flashes, then press \uparrow/\downarrow to select the correct character.

Tips

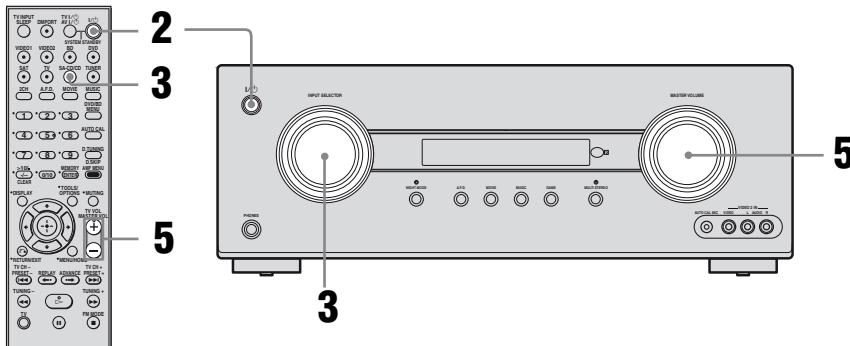
- You can select the character type as follows by pressing \uparrow/\downarrow .
Alphabet (upper case) → Numbers → Symbols
- To enter a blank space, press \rightarrow without selecting a character.

- 8 Press \oplus .**

The name you entered is registered.

Listening/Watching a component

Listening to a Super Audio CD/CD



Notes

- The operation is described for a Sony Super Audio CD player.
- Refer to the operating instructions supplied with the Super Audio CD player or CD player.

Tips

- You can select the sound field to suit the music. Refer to page 52 for details.

Recommended sound fields:

Classical: HALL

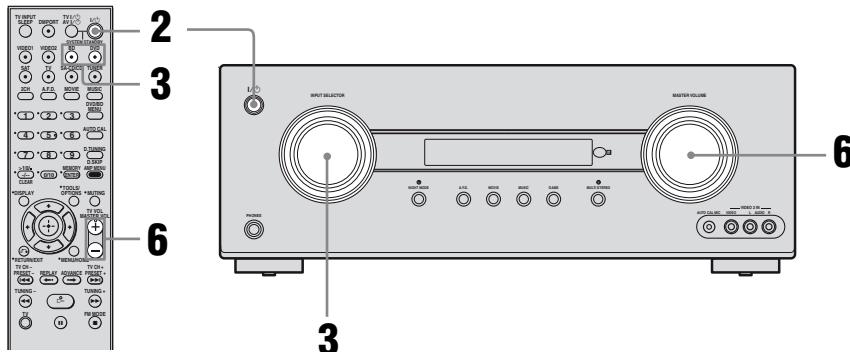
Jazz: JAZZ

Live concert: CONCERT

- You can listen to the sound that was recorded in the 2 channel format from all speakers (multi channel). Refer to page 50 for details.

- 1 Turn on the Super Audio CD player/CD player, then place the disc on the tray.**
- 2 Turn on the receiver.**
- 3 Press SA-CD/CD.**
You can also use INPUT SELECTOR on the receiver to select “SA-CD/CD/CD-R”.
- 4 Playback the disc.**
- 5 Adjust to a suitable volume.**
- 6 After you have finished listening to the Super Audio CD/CD, eject the disc and turn off the receiver and Super Audio CD player/CD player.**

Watching a DVD/Blu-ray disc



Notes

- Refer to the operating instructions supplied with the TV and DVD player/Blu-ray disc player.
- Check the following if you cannot listen to multi channel sound.
 - Be sure this receiver is connected to the DVD player/Blu-ray disc player via a digital connection.
 - Be sure the digital audio output of the DVD player/Blu-ray disc player is set up properly.

Tips

- Select the sound format of the disc to be played, if necessary.
- You can select the sound field to suit the movie/music. Refer to page 52 for details.

Recommended sound fields:

Movie: C.ST.EX

Music: CONCERT

1 Turn on the TV and DVD player/Blu-ray disc player.

2 Turn on the receiver.

3 Press DVD to watch a DVD or press BD to watch a Blu-ray disc.

You can also use INPUT SELECTOR on this receiver to select “DVD” or “BD”.

4 Switch the input of the TV so that an image of the DVD/Blu-ray disc is displayed.

5 Playback the disc.

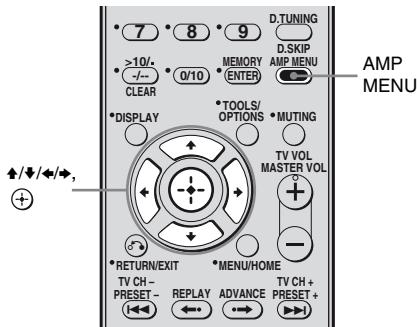
6 Adjust to a suitable volume.

7 After you have finished watching the DVD/Blu-ray disc, eject the disc and turn off the receiver, TV and DVD player/Blu-ray disc player.

Amplifier Operations

Navigating through menus

By using the amplifier menus, you can make various adjustments to customize the receiver.



1 Press AMP MENU.

“1-LEVEL” appears on the display.

2 Press \uparrow/\downarrow repeatedly to select the menu you want.

3 Press \oplus or \rightarrow to enter the menu.

4 Press \uparrow/\downarrow repeatedly to select the parameter you want to adjust.

5 Press \oplus or \rightarrow to enter the parameter.

6 Press \uparrow/\downarrow repeatedly to select the setting you want.

The setting is entered automatically.

To return to the previous display

Press \leftarrow .

To exit the menu

Press AMP MENU.

Note

Some parameters and settings may appear dimmed on the display. This means that they are either unavailable or fixed and unchangeable.

Overview of the menus

The following options are available in each menu. For details on navigating through menus, see page 39.

Menu [Display]	Parameters [Display]	Settings	Initial setting
LEVEL [1-LEVEL] (page 42)	Test tone ^{a)} [T. TONE]	T. TONE N, T. TONE Y	T. TONE N
	Front speaker balance ^{a)} [FRT BAL]	BAL. L +1 to BAL. L +8, BALANCE, BAL. BAL. R +1 to BAL. R +8	
	Center speaker level [CNT LVL]	CNT -10 dB to CNT +10 dB (1 dB step)	CNT 0 dB
	Surround left speaker level [SL LVL]	SUR L -10 dB to SUR L +10 dB (1 dB step)	SUR L 0 dB
	Surround right speaker level [SR LVL]	SUR R -10 dB to SUR R +10 dB (1 dB step)	SUR R 0 dB
	Surround back speaker level [SB LVL]	SB -10 dB to SB +10 dB (1 dB step)	SB 0 dB
	Subwoofer level [SW LVL]	SW -10 dB to SW +10 dB (1 dB step)	SW 0 dB
TONE [2-TONE] (page 43)	Dynamic range compressor ^{a)} [D. RANGE]	COMP. OFF, COMP. STD, COMP. MAX	COMP. OFF
	Front speaker bass level ^{b)c)} [BASS LVL]	BASS -6 dB to BASS +6 dB (1 dB step)	BASS 0 dB
	Front speaker treble level ^{b)c)} [TRE LVL]	TRE -6 dB to TRE +6 dB (1 dB step)	TRE 0 dB
SUR [3-SUR] (page 43)	Sound field selection ^{a)} [S.F. SELCT]	For details, see "Enjoying Surround Sound" (page 50).	A.F.D. AUTO
	Surround back decoding mode ^{a)} [SB DEC]	SB OFF, SB AUTO, SB ON	SB AUTO
	Effect level ^{a)} [EFFECT]	EFCT. MIN, EFCT. STD, EFCT. MAX	EFCT. STD
TUNER [4-TUNER] (page 45)	FM station receiving mode ^{a)} [FM MODE]	FM AUTO, FM MONO	FM AUTO
	Naming preset stations ^{a)} [NAME IN]	For details, see "Naming preset stations" (page 58).	
	AM tuning scale selection ^{a)d)} [AM STEP]	For detail, see "Changing the AM tuning scale" (page 56).	

Menu [Display]	Parameters [Display]	Settings	Initial setting
AUDIO [5-AUDIO] (page 45)	Digital broadcast language selection ^{a)} [DUAL] Synchronizes audio with video output ^{a)} [A.V. SYNC.]	DUAL M/S, DUAL M, DUAL S, DUAL M+S A.V.SYNC. N, A.V.SYNC. Y [A.V. SYNC.]	DUAL M A.V.SYNC. N
	Switching the audio input mode ^{a)} [IN MODE]	For details, see “Switching between digital and analog audio (INPUT MODE)” (page 59).	
	Night mode ^{a)} [NIGHT.MODE]	NIGHT OFF, NIGHT ON	NIGHT OFF
VIDEO [6-VIDEO] (page 46)	DIGITAL MEDIA PORT video assign ^{a)} [DMPORT V.]	–NONE, –VIDEO 1, –VIDEO 2, –DVD, –SAT	–NONE
SYSTEM [7-SYSTEM] (page 47)	Front speaker distance ^{a)} [FRT DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Center speaker distance ^{a)} [CNT DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Surround left speaker distance ^{a)} [SL DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Surround right speaker distance ^{a)} [SR DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Surround back speaker distance ^{a)} [SB DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Subwoofer phase polarity ^{a)} [SW PHASE]	NORMAL, REVERSE	NORMAL
	Surround speaker position ^{a)} [SUR POS.]	BEHD/HI, BEHD/LO, SIDE/HI, SIDE/LO	SIDE/LO
	Naming inputs ^{a)} [NAME IN]	For details, see “Naming inputs” (page 36).	
A. CAL [8-A. CAL] (page 49)	Auto Calibration ^{a)} [AUTO CAL]	A.CAL NO, A.CAL YES	A.CAL NO

^{a)} For details, refer to the page in the parentheses.

^{b)} This function does not work for signals with a sampling frequency of more than 48 kHz.

^{c)} If you adjust the tone during DTS 96/24 signal reception, the signal will be output only at 48 kHz.

^{d)} This parameter is not available for models of area code EA.

Adjusting the level (LEVEL menu)

You can use the LEVEL menu to adjust the balance and level of each speaker. These settings are applied to all sound fields. Select “1-LEVEL” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 39) and “Overview of the menus” (page 40).

LEVEL menu parameters

■ T. TONE (Test tone)

Lets you adjust the speaker levels and balance while listening to the test tone from your listening position. For details, see “8: Adjusting the speaker levels and balance (TEST TONE)” (page 34).

■ FRT BAL (Front speaker balance)

Lets you adjust the balance between front left and right speakers.

■ CNT LVL (Center speaker level)

■ SL LVL (Surround left speaker level)

■ SR LVL (Surround right speaker level)

■ SB LVL (Surround back speaker level)

■ SW LVL (Subwoofer level)

■ D. RANGE (Dynamic range compressor)

Lets you compress the dynamic range of the sound track. This may be useful when you want to watch movies at low volumes late at night. Dynamic range compression is possible with Dolby Digital sources only.

- COMP. OFF

The dynamic range is not compressed.

- COMP. STD

The dynamic range is compressed as intended by the recording engineer.

- COMP. MAX

The dynamic range is compressed dramatically.

Tip

Dynamic range compressor lets you compress the dynamic range of the soundtrack based on the dynamic range information included in the Dolby Digital signal. “COMP. STD” is the standard setting, but it only enacts light compression. Therefore, we recommend using the “COMP. MAX” setting. This greatly compresses the dynamic range and lets you view movies late at night at low volumes. Unlike analog limiters, the levels are predetermined and provide a very natural compression.

Adjusting the tone (TONE menu)

You can use the TONE menu to adjust the tonal quality (bass/treble level) of the front speakers.

Select “2-TONE” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 39) and “Overview of the menus” (page 40).

TONE menu parameters

- **BASS LVL (Front speaker bass level)**
- **TRE LVL (Front speaker treble level)**

Notes

- This function does not work for signals with a sampling frequency of more than 48 kHz.
- If you adjust the tone during DTS 96/24 signal reception, the signal will be output only at 48 kHz.

Settings for the surround sound (SUR menu)

You can use the SUR menu to select the sound field you want for your listening pleasure. Select “3-SUR” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 39) and “Overview of the menus” (page 40).

SUR menu parameters

- **S.F. SELCT (Sound field selection)**

Lets you select the sound field you want. For details, see “Enjoying Surround Sound” (page 50).

Note

The receiver lets you apply the last selected sound field to an input whenever it is selected (Sound Field Link). For example, if you select “HALL” for the DVD input, then change to a different input and then return to DVD, “HALL” will automatically be applied again.

- **SB DEC (Surround back decoding mode)**

Lets you select the surround back decoding mode. For details, see “Using the surround back decoding mode (SUR BACK DECODING)” (page 44).

- **EFFECT (Effect level)**

Lets you adjust the “presence” of the surround effect for sound fields selected with the MOVIE or MUSIC buttons.

- EFCT. MIN
The surround effect is minimum.
- EFCT. STD
The surround effect is standard.
- EFCT. MAX
The surround effect is maximum.

Using the surround back decoding mode

(SUR BACK DECODING)

By decoding the surround back signal of DVD software (etc.) recorded in Dolby Digital Surround EX, DTS-ES Matrix, DTS-ES Discrete 6.1, etc., format, you can enjoy the surround sound intended by the filmmakers. Select the surround back decoding mode using "SB DEC" on the SUR menu (page 43).

Types of the surround back decoding functions

■ SB OFF

Surround back decoding is not performed.

■ SB AUTO

When the input stream contains the 6.1 channel decode flag^{a)}, the appropriate decoding is performed on the surround back signal.

Input stream	Output channel	Surround back decoding
Dolby Digital 5.1	5.1	—
Dolby Digital Surround EX ^{b)}	6.1	Matrix decoder that conforms to Dolby Digital EX
DTS 5.1	5.1	—
DTS-ES Matrix 6.1 ^{c)}	6.1	DTS Matrix decoding
DTS-ES Discrete 6.1 ^{d)}	6.1	DTS Discrete decoding

■ SB ON

To decode the surround back signal regardless of the 6.1 channel decode flag^{a)}, Dolby Digital EX is applied when the output channel is 6.1.

Input stream	Output channel	Surround back decoding
Dolby Digital 5.1	6.1	Matrix decoder that conforms to Dolby Digital EX
Dolby Digital Surround EX ^{b)}	6.1	Matrix decoder that conforms to Dolby Digital EX
DTS 5.1	6.1	Matrix decoder that conforms to Dolby Digital EX
DTS-ES Matrix 6.1 ^{c)}	6.1	Matrix decoder that conforms to Dolby Digital EX
DTS-ES Discrete 6.1 ^{d)}	6.1	Matrix decoder that conforms to Dolby Digital EX

^{a)}A 6.1 channel decode flag is information recorded in software such as DVDs.

^{b)}A Dolby Digital DVD that includes a Surround EX flag. The Dolby Corporation web page can help you distinguish Surround EX films.

^{c)}Software encoded with a flag to denote it has both DTS-ES Matrix and 5.1 channel signals.

^{d)}Software encoded with both 5.1 channel signals and an extension stream designed for returning those signals to 6.1 discrete channels. Discrete 6.1 channel signals are DVD specific signals not used in movie theaters.

Notes

- There may be no sound from the surround back speaker in Dolby Digital EX mode. Some discs have no Dolby Digital Surround EX flag even though the packages have Dolby Digital EX logos. In this case, select "SB ON".
- You can select the surround back decoding mode only when A.F.D. mode is selected. However, this function is canceled when Dolby Pro Logic IIx is selected.

Settings for the tuner (TUNER menu)

You can use the TUNER menu to set the FM station receiving mode and to name preset stations.

Select “4-TUNER” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 39) and “Overview of the menus” (page 40).

TUNER menu parameters

■ FM MODE (FM station receiving mode)

- FM AUTO

This receiver will decode the signal as stereo signal when the radio station is broadcast in stereo.

- FM MONO

This receiver will decode the signal as mono signal regardless of the broadcast signal.

■ NAME IN (Naming preset stations)

Lets you set the name of preset stations. For details, see “Naming preset stations” (page 58).

■ AM STEP (AM tuning scale selection)*

Lets you change the AM STEP to either 9kHz or 10kHz. For details, see “Changing the AM tuning scale” (page 56).

*This parameter is not available for models of area code EA.

Settings for the audio (AUDIO menu)

You can use the AUDIO menu to make settings for the audio to suit your preference. Select “5-AUDIO” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 39) and “Overview of the menus” (page 40).

AUDIO menu parameters

■ DUAL (Digital broadcast language selection)

Lets you select the language you want to listen to during digital broadcast. This feature only functions for Dolby Digital sources.

- DUAL M/S (Main/Sub)

Sound of the main language will be output through the front left speaker and sound of the sub language will be output through the front right speaker simultaneously.

- DUAL M (Main)

Sound of the main language will be output.

- DUAL S (Sub)

Sound of the sub language will be output.

- DUAL M+S (Main + Sub)

Mixed sound of both the main and sub languages will be output.

■ A.V. SYNC. (Synchronizes audio with video output)

- A.V.SYNC. N (No) (Delay time: 0 ms)

The audio output is not delayed.

- A.V.SYNC. Y (Yes) (Delay time: 60 ms)

The audio output is delayed so that the time gap between the audio output and visual display is minimized.

Notes

- This parameter is useful when you use a large LCD or plasma monitor or a projector.
- This parameter is valid only when you use a sound field selected with the 2CH or A.F.D. buttons.
- This parameter is not valid when signals with a sampling frequency of more than 48 kHz are input.

■ IN MODE (Switching the audio input mode)

Lets you set the audio input mode of inputs. For details, see “Switching between digital and analog audio (INPUT MODE)” (page 59).

■ NIGHT.MODE

Lets you retain a theater-like environment at low volume levels. This function can be used with other sound fields. When watching a movie late at night, you will be able to hear the dialog clearly even at a low volume level.

- NIGHT OFF
- NIGHT ON

Settings for the video (VIDEO menu)

You can use the VIDEO menu to assign the composite video input to DMPORT input and to name inputs.

Select “6-VIDEO” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 39) and “Overview of the menus” (page 40).

VIDEO menu parameters

■ DMPORT V. (DIGITAL MEDIA PORT video assign)

Lets you assign the composite video input to DMPORT input so that you can view the image on the TV or projector. For details, see “Watching a connected component through DMPORT connection” (page 61).

Settings for the system (SYSTEM menu)

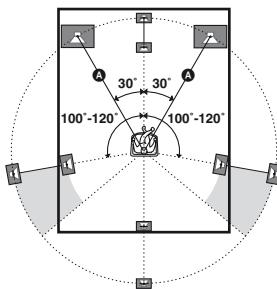
You can use the SYSTEM menu to set the distance of the speakers connected to this system.

Select “7-SYSTEM” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 39) and “Overview of the menus” (page 40).

SYSTEM menu parameters

■ FRT DIST. (Front speaker distance)

Lets you set the distance from your listening position to the front speakers (A). If both front speakers are not placed an equal distance from your listening position, set the distance to the closest speaker.



■ CNT DIST. (Center speaker distance)

Lets you set the distance from your listening position to the center speaker.

■ SL DIST. (Surround left speaker distance)

■ SR DIST. (Surround right speaker distance)

Lets you set the distance from your listening position to the surround speakers.

■ SB DIST. (Surround back speaker distance)

Lets you set the distance from your listening position to the surround back speaker.

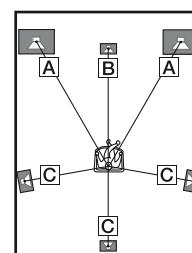
Tip

To enjoy better surround sound, the distance between the center speaker and the listening position [B] cannot be more than 1.5 meters closer than the one between the listening position and the front speaker [A]. Place the speakers so that the difference in the length of [B] in the following diagram is no more than 1.5 meters closer than the length of [A]. Example: Adjust the distance [B] to 4.5 meters or more when the distance [A] is 6 meters.

Also, the distance between the surround speakers/ surround back speakers and the listening position [C] cannot be more than 4.5 meters closer than the distance between the listening position and the front speakers [A]. Place the speakers so that the difference in the length of [C] in the following diagram is no more than 4.5 meters closer than the length of [A].

Example: Adjust the distance [C] to 1.5 meters or more when the distance [A] is 6 meters.

This is important because incorrect speaker placement is not conducive to the enjoyment of surround sound. Please note that placing the speakers closer than the required will cause a delay in the output of the sound from that speaker. In other words, the speaker will sound like it is farther away. Adjusting these parameter while listening to the sound often results in much better surround sound. Give it a try!



continued

■ SW PHASE (Subwoofer phase polarity)

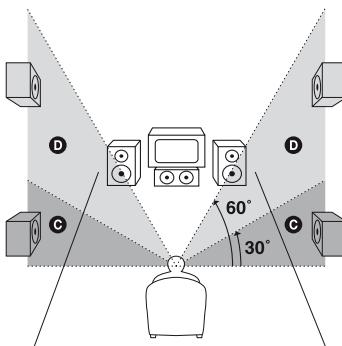
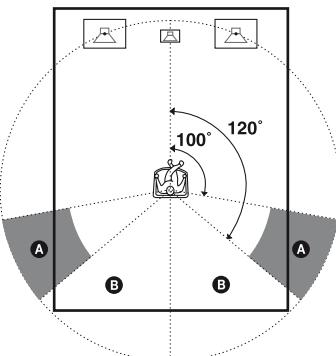
Lets you set the subwoofer phase polarity.

- NORMAL
Normally, select “NORMAL”.
- REVERSE

Depending on the type of front speakers, the position of the subwoofer, and the cut-off frequency of the subwoofer, setting the phase polarity to “REVERSE” may produce better bass. Besides bass reproduction, the richness and tightness of the overall sound may also be affected. While listening from the main listening position, select the setting that best suits your environment.

■ SUR POS. (Surround speaker position)

Lets you specify the location of your surround speakers for proper implementation of the surround effects in the Cinema Studio EX modes (page 53).



- BEHD/HI

Select if the location of your surround speakers corresponds to sections **B** and **D**.

- BEHD/LO

Select if the location of your surround speakers corresponds to sections **B** and **C**.

- SIDE/HI

Select if the location of your surround speakers corresponds to sections **A** and **D**.

- SIDE/LO

Select if the location of your surround speakers corresponds to sections **A** and **C**.

Tip

Surround speaker position is designed specifically for implementation of the Cinema Studio EX modes. For other sound fields, speaker position is not so critical.

Those sound fields were designed under the premise that the surround speakers would be located behind the listening position, but presentation remains fairly consistent even with the surround speakers positioned at a rather wide angle. However, if the speakers are pointing toward the listener from the immediate left and right of the listening position, the surround effects become unclear unless set to “SIDE/LO” or “SIDE/HI”.

Nevertheless, each listening environment has many variables, such as wall reflections, and you may obtain better results using “BEHD/HI” if your speakers are located high above the listening position, even if they are located to the immediate left and right.

Therefore, although it may result in a setting contrary to the above explanation, we recommend that you playback multi channel surround encoded software and select the setting that provides a good sense of spaciousness and that best succeeds in forming a cohesive space between the surround sound from the surround speakers and the sound of the front speakers. If you are not sure which sounds best, select “BEHD/LO” or “BEHD/HI” and then use the speaker distance parameter and speaker level adjustments to obtain proper balance.

■ NAME IN (Naming inputs)

Lets you set the name of inputs. For details, see “Naming inputs” (page 36).

Calibrating the appropriate settings automatically

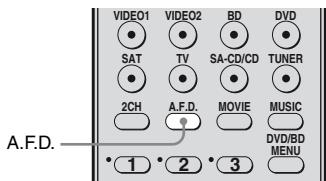
(A. CAL menu)

For details, see “7: Calibrating the appropriate settings automatically (AUTO CALIBRATION)” (page 31).

Enjoying Surround Sound

Enjoying Dolby Digital and DTS Surround sound (AUTO FORMAT DIRECT)

The Auto Format Direct (A.F.D.) mode allows you to listen to higher fidelity sound and select the decoding mode for listening to a 2 channel stereo sound as multi channel sound.



**Press A.F.D. repeatedly to select
the sound field you want.**

You can also use A.F.D. on the receiver.
For details, see “Types of A.F.D. mode” (page
51).

Types of A.F.D. mode

A.F.D. mode [Display]	Multi channel audio after decoding	Effect
A.F.D. AUTO [A.F.D. AUTO]	(Detecting automatically)	Performs the sound as it was recorded/encoded without adding any surround effects. However, this receiver will generate a low frequency signal for output to the subwoofer when there is no LFE signals.
PRO LOGIC [DOLBY PL]	4 channel	Performs Dolby Pro Logic decoding. The source recorded in 2 channel format is decoded into 4.1 channels.
PRO LOGIC II MOVIE [PLII MV]	5 channel	Performs Dolby Pro Logic II Movie mode decoding. This setting is ideal for movies encoded in Dolby Surround. In addition, this mode can reproduce sound in 5.1 channel for watching videos of overdubbed or old movies.
PRO LOGIC II MUSIC [PLII MS]	5 channel	Performs Dolby Pro Logic II Music mode decoding. This setting is ideal for normal stereo sources such as CDs.
PRO LOGIC II GAME [PLII GM]	5 channel	Performs Dolby Pro Logic II Game mode decoding. This setting is ideal for game softwares.
PRO LOGIC IIx MOVIE [PLIIX MV]	6 channel	Performs Dolby Pro Logic IIx Movie mode decoding. This setting expands Dolby Pro Logic II Movie or Dolby Digital 5.1 to discrete 6.1 movie channels.
PRO LOGIC IIx MUSIC [PLIIX MS]	6 channel	Performs Dolby Pro Logic IIx Music mode decoding. This setting is ideal for normal stereo sources such as CDs.
PRO LOGIC IIx GAME [PLIIX GM]	6 channel	Performs Dolby Pro Logic IIx Game mode decoding.
Neo:6 Cinema [NEO6 CIN]	6 channel	Performs DTS Neo:6 Cinema mode decoding.
Neo:6 Music [NEO6 MUS]	6 channel	Performs DTS Neo:6 Music mode decoding. This setting is ideal for normal stereo sources such as CDs.
MULTI STEREO [MULTI ST.]	(Multi Stereo)	Outputs 2 channel left/right signals from all speakers.

Note

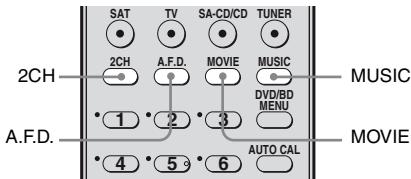
Dolby Pro Logic IIx decoding does not function for DTS format signals or for signals with a sampling frequency of more than 48 kHz.

Tip

When a multi channel signal is input, only Dolby Pro Logic IIx decoding is effective. When you select decoding modes other than Dolby Pro Logic IIx, multi channel sound (being encoded) is output.

Selecting a pre-programmed sound field

You can take advantage of surround sound simply by selecting one of the receiver's pre-programmed sound fields. They bring the exciting and powerful sound of movie theaters and concert halls into your home.



Press MOVIE repeatedly to select a sound field for movies or press MUSIC repeatedly to select a sound field for music.

For details, see "Types of sound field available" (page 53).

Types of sound field available

Sound field for	Sound field [Display]	Effect
Movie	CINEMA STUDIO EX A DCS [C.ST.EX A]	Reproduces the sound characteristics of the Sony Pictures Entertainment "Cary Grant Theater" cinema production studio. This is a standard mode, great for watching almost any type of movie.
	CINEMA STUDIO EX B DCS [C.ST.EX B]	Reproduces the sound characteristics of the Sony Pictures Entertainment "Kim Novak Theater" cinema production studio. This mode is ideal for watching science-fiction or action movies with lots of sound effects.
	CINEMA STUDIO EX C DCS [C.ST.EX C]	Reproduces the sound characteristics of the Sony Pictures Entertainment scoring stage. This mode is ideal for watching musicals or films where orchestra music is featured in the soundtrack.
	GAME [GAME]	Reproduces the sound processing of video games for better gaming experience.
Music	PORTRABLE AUDIO ENHANCER [PORTABLE]	Reproduces a clear enhanced sound image from your portable audio device. This mode is ideal for MP3 and other compressed music.
	HALL [HALL]	Reproduces the acoustics of a classical concert hall.
	JAZZ CLUB [JAZZ]	Reproduces the acoustics of a jazz club.
	LIVE CONCERT [CONCERT]	Reproduces the acoustics of a 300-seat live house.
Headphone*	HEADPHONE 2CH [HP 2CH]	This mode is selected automatically if you use headphone when 2 channel mode (page 54)/A.F.D. mode (page 51) is selected. Standard 2 channel stereo sources completely bypass the sound field processing and multi channel surround formats are downmixed to 2 channels.

* You can only select this sound field if the headphones are connected to the receiver.

Notes

- The effects provided by the virtual speakers may cause increased noise in the playback signal.
- When listening with sound fields that employ the virtual speakers, you will not be able to hear any sound coming directly from the surround speakers.
- This function does not work for signals with a sampling frequency of more than 48 kHz.
- The surround back decoding mode does not function when a sound field for movie or music is selected (page 44).

Tips

- You can identify the encoding format of DVD software, etc., by looking at the logo on the package.
- Sound fields with **DCS** mark use DCS technology. See "Glossary" (page 65).

To turn off the surround effect for movie/music

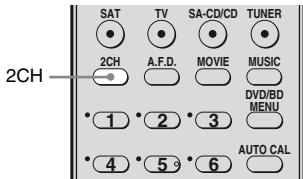
Press A.F.D. repeatedly to select "A.F.D. AUTO".

Using only the front speakers and subwoofers (2CH STEREO)

In this mode, the receiver outputs the sound from the front left/right speakers and the subwoofers.

When multi channel surround formats are input, the signals are downmixed to 2 channel with bass frequencies being output from the subwoofers.

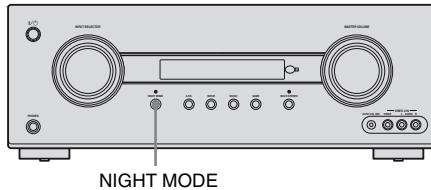
When standard 2 channel stereo sources are input, the receiver's bass redirection circuitry will be activated. The front channel bass frequencies will be output from the subwoofers.



Press 2CH.

Enjoying the surround effect at low volume levels (NIGHT MODE)

This function allows you to retain a theater like environment at low volume levels. This function can be used with other sound fields. When watching a movie late at night, you will be able to hear the dialog clearly even at a low volume level.



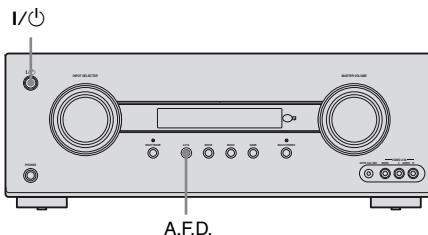
NIGHT MODE

Press NIGHT MODE.

The NIGHT MODE function is activated. The NIGHT MODE is set to on and off as you press NIGHT MODE.

Resetting sound fields to the initial settings

Be sure to use the buttons on the receiver for this operation.



- 1 Press I/O to turn off the power.
- 2 While holding down A.F.D., press I/O.

“S.F. CLR.” appears on the display and all sound fields are reset to their initial setting.

Tuner Operations

Listening to FM/AM radio

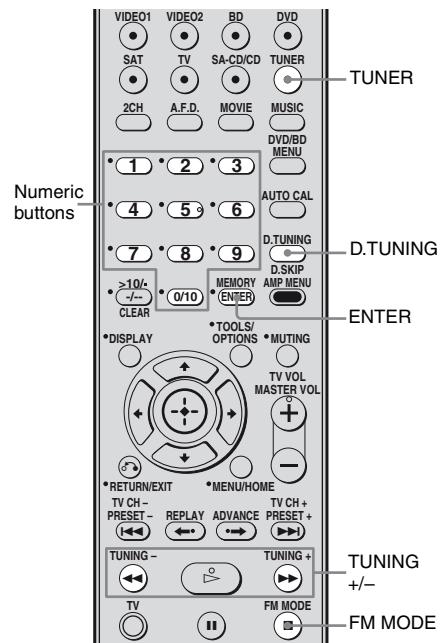
You can listen to FM and AM broadcasts through the built-in tuner. Before operation, make sure you have connected the FM and AM antennas to the receiver (page 28).

Tip

The initial tuning scale differs depending on the area code as shown in the following table. For details on area codes, see page 3.

Area code	FM	AM
SP, TH1, SA	50 kHz	9 kHz*
E51, MX, AR	50 kHz	10 kHz*
EA	50 kHz	9 kHz

* The AM tuning scale can be changed (page 56).



Tuning into a station automatically (Automatic Tuning)

- 1 Press TUNER repeatedly to select the FM or AM band.**
- 2 Press TUNING + or TUNING -.**

Press TUNING + to scan from low to high; press TUNING – to scan from high to low.

The receiver stops scanning whenever a station is received.

In case of poor FM stereo reception

If the FM stereo reception is poor and “ST” flashes on the display, select monaural audio so that the sound will be less distorted.

Press FM MODE repeatedly until the “FM MONO” appears on the display.

To return to stereo mode, press FM MODE repeatedly until the “FM AUTO” appears on the display.

Tuning into a station directly (Direct Tuning)

Enter the frequency of a station directly by using the numeric buttons.

- 1 Press TUNER repeatedly to select the FM or AM band.**
You can also use INPUT SELECTOR on the receiver.
- 2 Press D.TUNING.**

- 3 Press the numeric buttons to enter the frequency.**

Example 1: FM 102.50 MHz

Press 1 ➔ 0 ➔ 2 ➔ 5 ➔ 0

Example 2: AM 1,350 kHz

Press 1 ➔ 3 ➔ 5 ➔ 0

If you have tuned in an AM station, adjust the direction of the AM loop antenna for optimum reception.

- 4 Press ENTER.**

If you cannot tune in a station

Make sure you have entered the right frequency. If not, repeat steps 2 to 4. If you still cannot tune in a station, the frequency is not used in your area.

Changing the AM tuning scale

(Except for models of area code EA only)

You can change the AM tuning scale to either 9 kHz or 10 kHz.

- 1 Press TUNER repeatedly to select AM.**
- 2 Press AMP MENU.**
“1-LEVEL” appears on the display.
- 3 Press \uparrow/\downarrow repeatedly to select “4-TUNER”.**
- 4 Press \oplus or \rightarrow to enter the menu.**
- 5 Press \uparrow/\downarrow repeatedly to select “AM STEP”.**
- 6 Press \oplus or \rightarrow to enter the parameter.**

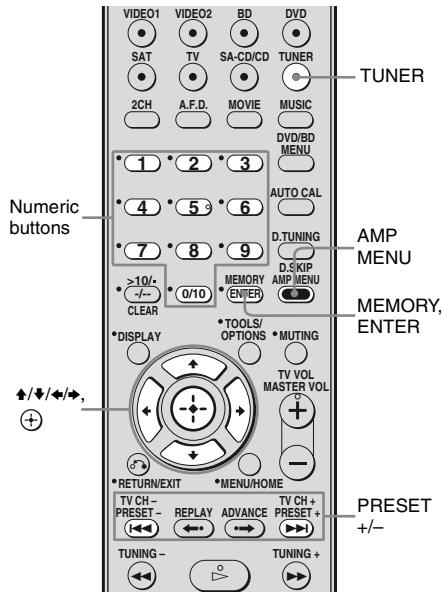
7 Press **▲/▼** repeatedly to select the AM tuning scale you want.

Note

All AM preset stations will be erased when you change the tuning scale.

Presetting radio stations

You can preset up to 30 FM stations and 30 AM stations. Then you can easily tune in the stations you often listen to.



1 Press **TUNER** repeatedly to select the FM or AM band.

You can also use INPUT SELECTOR on the receiver.

2 Tune in the station that you want to preset using Automatic Tuning (page 56) or Direct Tuning (page 56).

Switch the FM reception mode, if necessary (page 56).

3 Press **MEMORY**.

“MEM” lights up for a few seconds. Perform steps 4 and 5 before “MEM” goes out.

4 Press the numeric buttons to select a preset number.

You can also press PRESET + or PRESET – repeatedly to select a preset number.

If “MEM” goes out before you select the preset number, start again from step 3.

5 Press ENTER.

The station is stored as the selected preset number.

If “MEM” goes out before you press ENTER, start again from step 3.

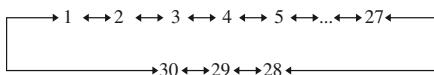
6 Repeat steps 1 to 5 to preset another station.

Tuning to preset stations

1 Press TUNER repeatedly to select the FM or AM band.

2 Press PRESET + or PRESET – repeatedly to select the preset station you want.

Each time you press the button, you can select a preset station as follows:



You can also press the numeric buttons to select the preset station you want. Then, press ENTER to enter the selection.

Naming preset stations

1 Press TUNER repeatedly to select the FM or AM band.

You can also use INPUT SELECTOR on the receiver.

2 Tune in the preset station you want to create an index name for (page 58).

3 Press AMP MENU.

“1-LEVEL” appears on the display.

4 Press \uparrow/\downarrow repeatedly to select “4-TUNER”.

5 Press \oplus or \rightarrow to enter the menu.

6 Press \uparrow/\downarrow repeatedly to select “NAME IN”.

7 Press \oplus or \rightarrow to enter the parameter.

The cursor flashes and you can select a character.

8 Press \uparrow/\downarrow to select a character, then press \leftarrow/\rightarrow to move the cursor to the next position.

If you made a mistake

Press \leftarrow/\rightarrow until the character you want to change flashes, then press \uparrow/\downarrow to select the correct character.

Tips

- You can select the character type as follows by pressing \uparrow/\downarrow .
Alphabet (upper case) → Numbers → Symbols
- To enter a blank space, press \rightarrow without selecting a character.

9 Press \oplus .

The name you entered is registered.

Other Operations

Switching between digital and analog audio (INPUT MODE)

You can select the audio input mode setting when you connect components to both digital and analog audio input jacks on the receiver.

1 Press the input button.

You can also use INPUT SELECTOR on the receiver.

2 Press AMP MENU.

“1-LEVEL” appears on the display.

3 Press \uparrow/\downarrow repeatedly to select “5-AUDIO”.

4 Press \oplus or \rightarrow to enter the menu.

5 Press \uparrow/\downarrow repeatedly to select “IN MODE”.

6 Press \oplus or \rightarrow to enter the parameter.

7 Press \uparrow/\downarrow repeatedly to select the audio input you want.

Audio input modes

■ AUTO

Gives priority to digital audio signals when there are both digital and analog connections. If there are no digital audio signals, analog audio signals are selected.

■ ANALOG

Specifies the analog audio signals input to the AUDIO IN (L/R) jacks.

Note

Some audio input modes may not be set up depending on the input.

Enjoying the DIGITAL MEDIA PORT (DMPORT)

The DIGITAL MEDIA PORT (DMPORT) allows you to enjoy sound from a network system such as a portable audio source or computer.

When you connect a DIGITAL MEDIA PORT adapter (not supplied), you can enjoy sound from the connected component on the receiver.

For details, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

Notes

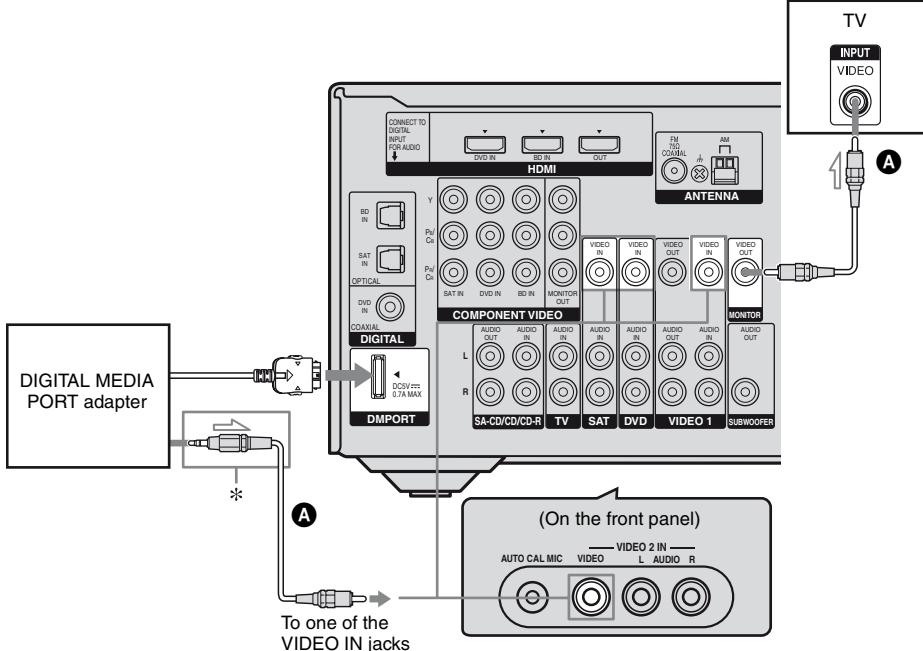
- Do not connect an adapter other than the DIGITAL MEDIA PORT adapter.
- Before connecting the cords, be sure to disconnect the AC power cord.
- Do not connect or disconnect the DIGITAL MEDIA PORT adapter while the receiver is turned on.
- Depending on the DIGITAL MEDIA PORT adapter, video output may not be possible.
- The DIGITAL MEDIA PORT adapters are available for purchase depending on the area.

Connecting the DIGITAL MEDIA PORT adapter

You can listen to the sound from the component connected through the DIGITAL MEDIA PORT adapter to the DMPORT jack on the receiver.

You can also view the images on the TV screen by connecting the video output of the DIGITAL MEDIA PORT adapter to the receiver.

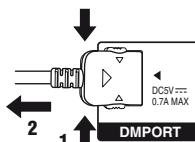
To view the images, proceed to “Watching a connected component through DMPORT connection” on page 61.



* The type of connector varies depending on the DIGITAL MEDIA PORT adapter.
For details, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

A Video cord (not supplied)

To detach the DIGITAL MEDIA PORT adapter from DMPORT jack



Press and hold both sides of the connector and then pull out the connector.

Notes

- When connecting the DIGITAL MEDIA PORT adapter, be sure the connector is inserted with the arrow mark facing toward the arrow mark on the DMPORT jack.
- Be sure to make DMPORT connections firmly, insert the connector straight in.
- As the connector of the DIGITAL MEDIA PORT adapter is fragile, be sure to handle with care when placing or moving the receiver.

Listening to a connected component through DMPORT connection

1 Press DMPORT.

You can also use the INPUT SELECTOR on the receiver to select “DMPORT”.

2 Start playback of the connected component.

The sound is played back on the receiver. For details, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

Watching a connected component through DMPORT connection

You need to assign composite video input to DMPORT input so that you can view the images on the TV screen.

1 Press AMP MENU.

“1-LEVEL” appears on the display.

2 Press \uparrow/\downarrow repeatedly to select “6-VIDEO”.

3 Press \oplus or \rightarrow to enter the menu.

4 Press \uparrow/\downarrow repeatedly to select “DMPORT V.”.

5 Press \oplus or \rightarrow to enter the parameter.

6 Press \uparrow/\downarrow repeatedly to select the composite video input you want to assign to DMPORT input.

Initial setting: –NONE

The assignable composite video input are VIDEO 1, VIDEO 2, DVD and SAT inputs.

For example, select “–SAT”.

When you press DMPORT, the images from the component connected to the SAT VIDEO IN jack through DIGITAL MEDIA PORT adapter will appear on the TV screen.

To return to the previous display

Press \leftarrow .

Notes

- Depending on the type of DIGITAL MEDIA PORT adapter, you can operate the connected component by using the remote. For details on remote button operation, see page 11.
- Be sure you have made the video connection from DIGITAL MEDIA PORT adapter to the receiver (page 60).
- Be sure you have connected the MONITOR OUT of the receiver to the TV (page 60).
- Depending on the DIGITAL MEDIA PORT adapter, video output may not be possible.

Tip

When listening to MP3 or other compressed music using a portable audio source, you can enhance the sound. Press MUSIC repeatedly to select “PORTABLE” (page 52).

Changing the display

You can check the sound field, etc., by changing the information on the display.

Press DISPLAY repeatedly.

Each time you press the button, the display changes cyclically as follows.

All inputs except the FM and AM band

Index name of the input* → Selected input → Sound field currently applied

FM and AM band

Preset station name* → Frequency → Sound field currently applied

* Index name appears only when you have assigned one to the input or preset station (page 36, 58).

Index name does not appear when only blank spaces have been entered, or it is the same as the input name.

Note

Characters or marks may not be displayed for some languages.

Using the Sleep Timer

You can set the receiver to turn off automatically at a specified time.

Press SLEEP repeatedly while the power is on.

Each time you press SLEEP, the display changes cyclically as follows:

2-00-00 → 1-30-00 → 1-00-00 → 0-30-00
→ OFF

When sleep timer is being used, “SLEEP” lights up in the display.

Tip

To check the remaining time before the receiver turns off, press SLEEP. The remaining time appears on the display. If you press SLEEP again, the sleep timer will be canceled.

Recording using the receiver

You can record from an audio/video component using the receiver. For details, refer to the operating instructions supplied with your recording component.

Recording onto a CD-R

You can record onto a CD-R using the receiver. Refer to the operating instructions supplied with your CD recorder.

1 Press one of the input buttons to select the playback component.

You can also use INPUT SELECTOR on the receiver.

2 Prepare the playback component for playing.

For example, tune to the radio station you want to record.

3 Prepare the recording component.

Insert a blank CD-R into the CD recorder and adjust the recording level.

4 Start recording on the recording component, then start playback on the playback component.

Note

Sound adjustments do not affect the signal output from the SA-CD/CD/CD-R OUT jacks.

Recording onto a recording media

1 Press one of the input buttons to select the playback component.

You can also use INPUT SELECTOR on the receiver.

2 Prepare the playback component for playing.

For example, insert the video tape you want to copy into the VCR.

3 Prepare the recording component.

Insert a blank video tape, etc. into the recording component (VIDEO 1) for recording.

4 Start recording on the recording component, then start playback on the playback component.

Notes

- Some sources contain copy guards to prevent recording. In this case, you may not be able to record from the source.
- You cannot record from DMPORT if you have
 - connected the DMPORT video jack to the VIDEO 1 VIDEO IN jack on the receiver (page 60).
 - assigned “DMPORT V.” to “-VIDEO 1” in the VIDEO menu (page 41).

Changing button assignments

You can change the factory settings of the input buttons to suit the components in your system. For example, if you connect a DVD recorder to the VIDEO 1 jacks on the receiver, you can set the VIDEO 1 button on this remote to control the DVD recorder.

Note

You cannot change the setting of TUNER and DMPORT buttons.

1 Hold down the input button of which you want to change the assignment.

Example: Hold down VIDEO 1.

2 Referring to the table below, press the corresponding button for the category you want.

Example: Press 4.

Now you can use the VIDEO 1 button to control the DVD recorder.

Categories and the corresponding buttons

Categories	Press
VCR (command mode VTR 3) ^{a)}	1
VCR (command mode VTR 2) ^{a)}	2
DVD player/DVD recorder (command mode DVD1) ^{b)}	3
DVD recorder (command mode DVD3) ^{b)}	4
CD player	5
Euro Digital Satellite Receiver	6
DVR (Digital CATV terminal)	7
DSS (Digital Satellite Receiver)	8
Blu-ray disc player (command mode BD1) ^{c)}	9
Blu-ray disc recorder (command mode BD3) ^{c)}	0/10
TV	-/-

^{a)}Sony VCRs are operated with a VTR 2 or VTR 3 setting which corresponds to 8 mm and VHS respectively.

^{b)}Sony DVD recorders are operated with a DVD1 or DVD3 setting. For details, refer to the operating instructions supplied with the DVD recorders.

^{c)}For details on the BD1 or BD3 setting, refer to operating instructions supplied with the Blu-ray disc player or Blu-ray disc recorder.

To clear all remote button assignments

While holding down MASTER VOL -, press **I/O** and DMPORT.

The remote is reset to its factory settings.

Additional Information

Glossary

■ Cinema Studio EX

A surround sound mode that can be regarded as the compilation of Digital Cinema Sound technology, delivers the sound of a dubbing theater using three technologies: "Virtual Multi Dimensions", "Screen Depth Matching", and "Cinema Studio Reverberation".

"Virtual Multi Dimensions", the virtual speaker technology, creates a virtual multi-surround environment with actual speakers up to 7.1 channels, and brings the surround sound experience of a theater with the latest facilities into your home.

"Screen Depth Matching" reproduces treble attenuation, fullness, and depth of sound usually created in a theater using sound emission from behind the screen. This is then added to the front and center channels.

"Cinema Studio Reverberation" reproduces the sound characteristics of state-of-the-art dubbing theaters and recording studios, including Sony Pictures Entertainment's dubbing studios. There are three modes, A/B/C, available according to the studio type.

■ Component video

A format for transmitting video signal information consisting of three separate signals: luminance Y, chrominance Pb, and chrominance Pr. High quality pictures, such as DVD video or HDTV pictures, are transmitted more faithfully. The three jacks are color-coded green, blue and red.

■ Composite video

A standard format for transmitting video signal information. The luminance signal Y and chrominance signal C are combined and transmitted together.

■ Digital Cinema Sound (DCS)

A unique sound reproduction technology for home theater developed by Sony, in cooperation with Sony Pictures Entertainment, for enjoying the exciting and powerful sound of movie theaters at home. With this "Digital Cinema Sound" developed by integrating a DSP (Digital Signal Processor) and measured data, the ideal sound field intended by filmmakers can be experienced at home.

■ Dolby Digital

Digital audio encoding/decoding technology developed by Dolby Laboratories, Inc. It consists of front (left/right), center, surround (left/right) and subwoofer channels. It is a designated audio standard for DVD-video and also known as 5.1 channel surround. Since surround information is recorded and reproduced in stereo, more realistic sound with fuller presence is delivered than with Dolby surround.

■ Dolby Digital Surround EX

Acoustic technology developed by Dolby Laboratories, Inc. Surround back information is matrixed into regular left and right surround channels so that the sound can be reproduced in 6.1 channel. Active scenes, especially, are recreated with a more dynamic and realistic sound field.

■ Dolby Pro Logic II

This technology converts 2 channel stereo recorded audio into 5.1 channel for playback. There is a MOVIE mode for movies and MUSIC mode for stereo sources such as music. Old movies encoded in the traditional stereo format can be enhanced with 5.1 channel surround sound.

■ Dolby Pro Logic IIx

Technology for 7.1 channel (or 6.1 channel) playback. Along with audio encoded in Dolby Digital Surround EX, 5.1 channel Dolby Digital encoded audio can be reproduced in 7.1 channel (or 6.1 channel). Furthermore, existing stereo recorded content can also be reproduced in 7.1 channel (or 6.1 channel).

■ Dolby Surround (Dolby Pro Logic)

Audio processing technology developed by Dolby Laboratories, Inc. Center and mono surround information is matrixed into two stereo channels. When reproduced, audio is decoded and output in 4 channel surround sound. This is the most common audio processing method for DVD-video.

■ DTS 96/24

A high sound quality digital signal format. It records audio at a sampling frequency and bit rate of 96kHz/24bit which is the highest possible for DVD-video. The number of playback channels varies depending on the software.

■ DTS Digital Surround

Digital audio encoding/decoding technology for theaters developed by DTS, Inc. It compresses audio less than Dolby Digital, delivering a higher quality sound reproduction.

■ DTS-ES

Format for 6.1 channel playback with surround back information. There are two modes, "Discrete 6.1" which records all channels independently, and "Matrix 6.1" which matrixes surround back channel into LS (left surround) and RS (right surround) channels. It is ideal for playback of motion picture soundtracks.

■ DTS Neo:6

This technology converts 2 channel stereo recorded audio for 6.1 channel playback. There are two modes to select according to the playback source or your preference, CINEMA for movies, and MUSIC for stereo sources such as music.

■ HDMI (High-Definition Multimedia Interface)

HDMI (High-Definition Multimedia Interface) is an interface that supports both video and audio on a single digital connection, allowing you to enjoy high quality digital picture and sound. The HDMI specification supports HDCP (High-bandwidth Digital Contents Protection), a copy protection technology that incorporates coding technology for digital video signals.

■ PCM (Pulse Code Modulation)

A method of converting analog audio to digital audio for easy enjoyment of digital sound.

■ Sampling frequency

To convert analog audio to digital, analog data should be quantified. This process is called sampling, and the number of times per second the analog data is quantified is called the sampling frequency. A standard music CD stores data quantified at 44,100 times per second, which is expressed as a sampling frequency of 44.1 kHz. Generally speaking, a higher sampling frequency means better sound quality.

Precautions

On safety

Should any solid object or liquid fall into the cabinet, unplug the receiver and have it checked by qualified personnel before operating it any further.

On power sources

- Before operating the receiver, check that the operating voltage is identical with your local power supply.
The operating voltage is indicated on the nameplate on the back of the receiver.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- If you are not going to use the receiver for a long time, be sure to disconnect the receiver from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- The AC power cord must be changed only at a qualified service shop.

On heat buildup

Although the receiver heats up during operation, this is not a malfunction. If you continuously use this receiver at a large volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.

On placement

- Place the receiver in a location with adequate ventilation to prevent heat buildup and prolong the life of the receiver.
- Do not place the receiver near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
- Do not place anything on top of the cabinet that might block the ventilation holes and cause malfunctions.
- Do not place the receiver near equipment such as a television, VCR, or tape deck. (If the receiver is being used in combination with a television, VCR, or tape deck, and is placed too close to that equipment, noise may result, and picture quality may suffer. This is especially likely when using an indoor antenna. Therefore, we recommend using an outdoor antenna.)
- Use caution when placing the receiver or speakers on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

On operation

Before connecting other components, be sure to turn off and unplug the receiver.

If you encounter color irregularity on a nearby TV screen

The front speakers, center speaker and the subwoofers are magnetically shielded to allow it to be installed near a TV set. However, color irregularities may still be observed on certain types of TV sets. As the surround and surround back speakers are not magnetically shielded, we recommend that you place them slightly further away from a TV set (page 14).

If color irregularity is observed...

Turn off the TV set, then turn it on again after 15 to 30 minutes.

If color irregularity is observed again...

Place the speakers further away from the TV set.

If howling occurs

Reposition the speakers or turn down the volume on the receiver.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.

If you have any questions or problems concerning your receiver, please consult your nearest Sony dealer.

Troubleshooting

If you experience any of the following difficulties while using the receiver, use this troubleshooting guide to help you remedy the problem.

Audio

There is no sound, no matter which component is selected, or only a very low-level sound is heard.

- Check that the speakers and components are connected securely.
- Check that all speaker cords are connected correctly.
- Check that both the receiver and all components are turned on.
- Check that MASTER VOLUME is not set to "VOL MIN".
- Check that headphones are not connected.
- Press MUTING on the remote to cancel the muting function.
- Check that you have selected the correct component with the input buttons.
- When only a very low-level sound is heard, check to see if NIGHT MODE is activated.
- The protective device on the receiver has been activated. Turn off the receiver, eliminate the short-circuit problem, and turn on the power again.

There is no sound from a specific component.

- Check that the component is connected correctly to the audio input jacks for that component.
- Check that the cord(s) used for the connection is (are) fully inserted into the jacks on both the receiver and the component.

There is no sound from one of the front speakers.

- Connect a pair of headphones to the PHONES jack to verify that sound is output from the headphones. If only one channel is output from the headphones, the component may not be connected to the receiver correctly. Check that all the cords are fully inserted into the jacks on both the receiver and the component. If both channels are output from the headphones, the front speaker may not be connected to the receiver correctly. Check the connection of the front speaker which is not outputting any sound.
- Make sure you have connected to both the L and R jacks of an analog component, and not only to either the L or R jack. Use an audio cord (not supplied).

There is no sound from digital sources (from COAXIAL or OPTICAL input jack).

- Check that the INPUT MODE is set to "AUTO" (page 59).

The left and right sounds are unbalanced or reversed.

- Check that the speakers and components are connected correctly and securely.
- Adjust the balance parameters using the LEVEL menu.

There is severe hum or noise.

- Check that the speakers and components are connected securely.
- Check that the connecting cords are away from a transformer or motor, and at least 3 meters away from a TV set or fluorescent light.
- Move your audio components away from the TV.
- The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

There is no sound, or only a very low-level sound is heard from the center/surround/surround back speakers.

- Select a CINEMA STUDIO EX mode (page 53).
- Adjust the speaker level (page 34).

There is no sound from the surround back speaker.

- Some discs have no Dolby Digital Surround EX flag even though the packages have Dolby Digital Surround EX logos. In this case, select "SB ON" (page 44).

There is no sound from the subwoofer.

- Check that the speaker cords and monaural audio cord (supplied) are connected correctly and securely (page 18).
- Check that the system control cable (supplied) is fully inserted into the SYSTEM CONTROL jack (page 18).
- Check that the SUBWOOFER VOLUME on the power amplifier is not set to MIN.

The surround effect cannot be obtained.

- Make sure the sound field function is on (press MOVIE or MUSIC).
- Sound fields do not function for signals with a sampling frequency of more than 48 kHz.

Dolby Digital or DTS multi channel sound is not reproduced.

- Check that the DVD, etc. you are playing is recorded in Dolby Digital or DTS format.
- When connecting the DVD player, etc., to the digital input jacks of this receiver, check the audio setting (the settings for the audio output) of the connected component.

There is no sound from the component connected to the DIGITAL MEDIA PORT adapter.

- Adjust the volume of this receiver.
 - The DIGITAL MEDIA PORT adapter and/or component is not connected correctly. Turn off the receiver, then reconnect the DIGITAL MEDIA PORT adapter and/or component.
 - Check the DIGITAL MEDIA PORT adapter and/or component device to make sure it supports this receiver.
-

Video

There is no picture or an unclear picture appears on the TV screen.

- Select the appropriate input using the input buttons.
 - Set your TV to the appropriate input mode.
 - Move your audio components away from the TV.
 - Depending on the DIGITAL MEDIA PORT adapter, video output may not be possible.
-

Recording cannot be carried out.

- Check that the components are connected correctly.
 - Select the source component using the input buttons.
 - When you want to record from DMPort, check that
 - the DMPort video jack is not connected to the VIDEO 1 VIDEO IN jack on the receiver (page 60).
 - “DMPort V.” is not assigned to “–VIDEO 1” in the VIDEO menu (page 41).
-

HDMI

The source sound input to the HDMI jack on the receiver is not output from the TV speaker.

- Check the HDMI connection.
- You cannot listen to the Super Audio CD by connecting HDMI.
- Depending on the playback component, you may need to set up the component. Refer to the operating instructions supplied with each component.

There is no sound from the speakers of the receiver when you connect the receiver and the playback component via an HDMI connection.

- Make sure that you have connected the digital audio jacks on the playback component to the receiver. Then, turn off the TV's volume or activate the TV's muting function.

The source image input to the HDMI jack on the receiver is not output from the TV.

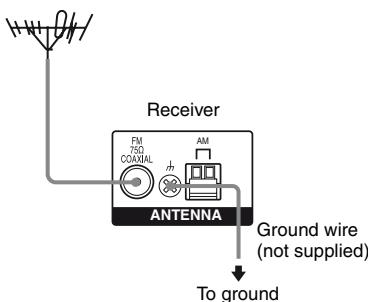
- Check the HDMI connection.
 - Depending on the playback component, you may need to set up the component. Refer to the operating instructions supplied with the each component.
-

Tuner

The FM reception is poor.

- Use a 75-ohm coaxial cable (not supplied) to connect the receiver to an outdoor FM antenna as shown below. If you connect the receiver to an outdoor antenna, ground it against lightning. To prevent a gas explosion, do not connect the ground wire to a gas pipe.

Outdoor FM antenna



Radio stations cannot be tuned in.

- Check that the antennas are connected securely. Adjust the antennas and connect an external antenna, if necessary.
- The signal strength of the stations is too weak (when tuning in with automatic tuning). Use direct tuning.
- Make sure you set the tuning interval correctly (when tuning in AM stations with direct tuning).
- No stations have been preset or the preset stations have been cleared (when tuning by scanning preset stations). Preset the stations (page 57).
- Press DISPLAY repeatedly so that the frequency appears on the display.

Remote commander

The remote does not function.

- Point the remote at the remote sensor on the receiver.
- Remove any obstacles in the path between the remote and the receiver.
- Replace all the batteries in the remote with new ones, if they are weak.
- Make sure you select the correct input on the remote.

Error messages

If there is a malfunction, the display shows a message. You can check the condition of the system by the message. Refer to the following table to solve the problem. If any problem persists, consult your nearest Sony dealer. If an error message appears while you perform Auto Calibration, see "Error and warning codes" (page 33) to solve the problem.

PROTECT

Irregular current is output to the speakers, or the upper panel of the receiver is covered with something. The receiver will automatically turn off after a few seconds. Check the speaker connection and turn on the power again.

PROTECT SUBWOOFER

Irregular current is output to the subwoofers. The receiver will automatically turn off after a few seconds. Check the subwoofers connections and turn on the power again.

If you are unable to remedy the problem using the troubleshooting guide

Clearing the receiver's memory may remedy the problem (page 30). However, note that all memorized settings will be reset to their factory settings and you will have to readjust all settings on the receiver.

If the problem persist

Consult your nearest Sony dealer. Note that if service personnel changes some parts during repair, these parts may be retained.

Reference sections for clearing the memory

To clear	See
All memorized settings	page 30
Customized sound fields	page 55

Specifications

Amplifier section

• Receiver (STR-KM5500)

Power Output

Models of area code SP, MX, E51, AR, TH1, SA, EA

Stereo mode output (rated) (6 ohms, 1 kHz, THD 1%)

100 W + 100 W¹⁾

90 W + 90 W²⁾

Surround mode output (reference)³⁾

RMS output

FRONT: 185 W per channel¹⁾
170 W per channel²⁾
(with SS-MSP7500)

CENTER: 185 W¹⁾
170 W²⁾
(with SS-CNP7500)

SURROUND: 185 W per channel¹⁾
170 W per channel²⁾
(with SS-SRP7500)

SURROUND BACK:
185 W¹⁾
170 W²⁾
(with SS-SRP7500)

• Power amplifier (TA-KMSW500)

RMS output (6 ohms, 80 Hz, THD 10%)

200 W per channel¹⁾

185 W per channel²⁾

Input LINE IN (input pin jacks)

¹⁾Measured under the following conditions:

Area code	Power requirements
E51, SP, SA	240 V AC, 50 Hz
MX, EA	127 V AC, 60 Hz
AR, TH1	230 V AC, 50 Hz

²⁾Measured under the following conditions:

Area code	Power requirements
AR, TH1	220 V AC, 50 Hz

³⁾Reference power output for front, center, surround and surround back speakers. Depending on the sound field settings and the source, there may be no sound output.

Inputs

Analog	Sensitivity: 800 mV/ 50 kohms
Digital (Coaxial)	Impedance: 75 ohms

Outputs (Analog)

AUDIO OUT	Voltage: 800 mV/ 10 kohms
SUBWOOFER	Voltage: 2 V/1 kohm

Tone

Gain levels	±6 dB, 1 dB step
-------------	------------------

Reproduction frequency range:

28 – 20,000 Hz

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna	FM wire antenna
Antenna terminals	75 ohms, unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range

Area code	Tuning scale	
	10 kHz step	9 kHz step
AR, MX, E51	530 – 1,710 kHz	531 – 1,710 kHz
SP, TH1, SA	530 – 1,610 kHz	531 – 1,602 kHz
EA	–	531 – 1,602 kHz

Antenna

Loop antenna

Intermediate frequency

450 kHz

Video section

Inputs/Outputs

Video: 1 Vp-p, 75 ohms

COMPONENT VIDEO:

Y: 1 Vp-p, 75 ohms

P_B/C_B: 0.7 Vp-p, 75 ohms

P_R/C_R: 0.7 Vp-p, 75 ohms

80 MHz HD Pass Through

HDMI Video⁴⁾⁵⁾

⁴⁾The TV output resolution will depends on the capability of TV and component.

⁵⁾Not support Deep Color.

General

Power requirements

Area code	Power requirements
SP, SA	230 – 240 V AC, 50/60 Hz
MX	127 V AC, 60 Hz
E51	120/220/240 V AC, 50/60 Hz
AR, TH1	220 – 230 V AC, 50/60 Hz
EA	120 – 127/220/230 – 240 V AC, 50/60 Hz

Power output (DIGITAL MEDIA PORT)

DC OUT: 5 V, 0.7 A MAX

System Control output

DC OUT: 5 V, 50mA MAX

Power consumption 200 W (STR-KM5500)
160 W (TA-KMSW500)

Power consumption (during standby mode)
0.3 W

Dimensions (width/height/depth) including projecting parts and controls (Approx.)

Receiver 430 × 158 × 342 mm

Power amplifier 430 × 158 × 332 mm

Mass (Approx.)

Receiver 7.6 kg

Power amplifier 6.6 kg

Speaker section

•Front speaker (SS-MSP7500)

Speaker system	2-way, 3-driver, Bass reflex, Magnetically shielded
Speaker unit	
Woofer:	200 mm, cone type × 2
Tweeter:	25 mm, horn type
Rated Impedance	6 ohms
Dimensions (width/height/depth) (Approx.)	325 × 980 × 340 mm (with foot)
Mass (Approx.)	13.5 kg

•Center speaker (SS-CNP7500)

Speaker system	2-way, 3-driver, Bass reflex, Magnetically shielded
Speaker unit	
Woofer:	100 mm, cone type × 2
Tweeter:	25 mm, horn type
Rated Impedance	6 ohms
Dimensions (width/height/depth) (Approx.)	515 × 175 × 245 mm (with foot)
Mass (Approx.)	4.7 kg

•Surround/Surround back speaker (SS-SRP7500)

Speaker system	Full range, Bass reflex
Speaker unit	
Woofer:	100 mm, cone type
Rated Impedance	6 ohms
Dimensions (width/height/depth) (Approx.)	174 × 220 × 180 mm (with foot)
Mass (Approx.)	1.6 kg

•Subwoofer (SS-WP7500)

Speaker system	Bass reflex, Magnetically shielded
Speaker unit	250 mm, cone type
Rated Impedance	6 ohms
Dimensions (width/height/depth) (Approx.)	335 × 420 × 330 mm (with foot)
Mass (Approx.)	7.9 kg

Supplied speakers

Front speaker (2)
Center speaker (1)
Surround speaker (2)
Surround back speaker (1)
Subwoofer (2)

Supplied accessories

Operating instructions (this manual)
Quick Setup Guide (1)
FM wire antenna (1)
AM loop antenna (1)
Monaural audio cord (1)
Coaxial digital cord (1)
System control cable (1)
Speaker cords
• Long (3)
• Short (5)
Foot pads
• Speakers (16)
• Subwoofer (8)
Optimizer microphone (ECM-AC2 or ECM-AC2a) (1)
Remote commander (RM-AAU027) (1)
R6 (size-AA) batteries (2)

For details on the area code of the component you are using, see page 3.

Design and specifications are subject to change without notice.

Halogenated flame retardants are not used in the certain printed wiring boards.

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